

**Bond University**

## **DOCTORAL THESIS**

### **An Exploration of the Effects of Outcome Desirability and Agency Appraisals on Emotions and Consumer Decision-Making Processes.**

Watson, Lisa

*Award date:*  
2006

[Link to publication](#)

#### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.


**An Exploration of the Effects of Outcome Desirability and Agency Appraisals on  
Emotions and Consumer Decision-Making Processes**

This thesis is submitted  
to Bond University by  
Lisa Watson, M.M.S., B. Com. (Hons)  
in partial fulfilment of the requirements of the degree of  
Doctor of Philosophy in Business

Dissertation Supervisor:  
Dr. Mark T. Spence

### Signed Certification

This thesis represents my own work and contains no material which has been previously submitted for a degree or diploma at Bond University or any other institution, except where due acknowledgement is made.

A handwritten signature in black ink, appearing to read 'L Watson', is positioned above a horizontal line. The signature is written in a cursive, flowing style.

Lisa Watson, M.M.S., B. Com. (Hons)

March 31, 2006

Date

### Summary

Researchers have traditionally focused on the dimensions of valence and arousal when studying how affect, mood and emotions influence consumer decision-making processes. As a result, it was concluded that negative emotions were associated with more systematic processing and positive emotions were related to more heuristic processing (Tiedens and Linton, 2001). However, recent studies of the effects of emotions on consumer decision-making have shown that emotions with the same valence and arousal level can lead to different response behaviours (Lerner and Keltner, 2000; Ragunathan and Pham, 1999; Tiedens and Linton, 2001; Yi and Baumgartner, 2004). Cognitive appraisals have been offered as an avenue for explaining these differences (Bagozzi, Gopinath and Nyer, 1999; Ruth, Brunel and Otnes, 2002; Tiedens and Linton, 2001); however, a comprehensive theory of their effects on decision-making has yet to emerge. This three study research program tests whether the cognitive appraisals of outcome desirability and agency combine to offer a more comprehensive explanation of emotion's effect on consumer decision-making processes than has been offered to date. Outcome desirability and agency are proposed to influence decision-making processes both directly and through the mediating influence of emotions. Results show that emotions mediate relationships between outcome desirability and agency appraisals and consumer decision-making processes. There is some evidence to suggest that agency driven emotions differentially influence consumer decision-making processes and outcomes. Further study is needed to confirm how these complex interactions work together to drive decision-making behaviours.

### **Acknowledgements**

The author wishes to sincerely thank all of the people who contributed to the successful completion of this project. Support was extended by a wide range of people, including colleagues, family and friends.

Mark Spence provided solid guidance and support throughout the entire dissertation process. He made his supervisory duties a top priority and approached them enthusiastically. His feedback was always insightful, plentiful and very much appreciated; red ink will always bring back genuinely fond memories of Mark's dedication to my success.

In the early stages of this project, theoretical and methodological foundations for this research were greatly improved by the helpful insights of dissertation committee member Dr. Marilyn Jones, Drs. Charles Areni, Deborah MacInnis, Gordon McDougall, Art Goldsmith, Stephen Holden, Chris Miller, and other members of the Faculty of Business, Bond University. At the final stage, examiners Drs. Charles Areni, Rebekah Bennet and Stephen Holden provided detailed and thoughtful feedback for improving the final document through the revision process. This dissertation is of a higher calibre as a result.

Data collection over the Internet was made possible by Mr. James Russell, who volunteered weeks of his time to program the necessary web pages and data storage files. His time and patience doubtlessly increased sample sizes by allowing respondents to participate at their convenience, as well as allowing for more thorough tracking of information search than would have been otherwise possible. Dr. Phil Stocks helped me to accurately report dependent variables by writing a computer program that took respondents' decision-making process records and automatically calculated their associated dependent variable values for analysis. The fact that I didn't have to do any data entry was just a bonus. Brisbane Ultimate Disc Association was also helpful in recruiting respondents for Study 2; it was a pleasure to provide a monetary donation in exchange for their efforts.

Thanks also go out to the following individuals for their personal contributions. My family, Bill, Diane and Kelli Watson, supported my decision to take up this challenge so far away from home. My partner, François Deslauriers, made my work a priority and did everything he could to help me succeed. Stephen Holden helped me to keep it all in perspective. Phil Stocks recognized every possible milestone with a celebration and helped keep my momentum going. None of them ever questioned my ability.

## Table of Contents

|  |         |
|--|---------|
| Signed Certification.....  | I       |
| Summary.....   | II      |
| Acknowledgements .....   | III     |
| Table of Contents .....  | V       |
| List of Tables.....  | VI      |
| List of Figures.....   | VII     |
| <br>Chapter 1: Introduction.....   | <br>1   |
| Chapter 2: Literature Review .....   | 6       |
| Distinguishing Affect, Mood and Emotion .....  | 6       |
| Approaches to Studying Emotions .....  | 7       |
| How Cognitive Appraisals Elicit Emotions.....  | 10      |
| Attribution Theory, the Agency Appraisal and Consumer Decision-making Processes.....                       | 21      |
| How Emotions Influence Consumer Decision-making Processes .....  | 22      |
| Chapter 3: Hypotheses.....   | 26      |
| Direct and Indirect Effects of Outcome Desirability and Agency Appraisals on Consumer Decision-making..... | 27      |
| The Effects of Outcome Desirability and Agency Appraisals on Emotions .....                                | 29      |
| The Effects of Emotions on Consumer Decision-making Processes .....  | 33      |
| The Effects of Outcome Desirability and Agency Appraisals on Consumer Decision-making Extensiveness .....  | 37      |
| Anticipated Comparative Consumer Decision-making Extensiveness Effects.....                                | 42      |
| Chapter 4: Methodology.....  | 46      |
| Study 1.....   | 47      |
| Study 2.....   | 53      |
| Study 3.....   | 57      |
| Chapter 5: Study 1 Results .....   | 61      |
| Chapter 6: Study 2 Results .....   | 74      |
| Chapter 7: Study 3 Results .....   | 87      |
| Chapter 8: Discussion.....   | 98      |
| Introduction .....   | 98      |
| Findings .....   | 98      |
| Contributions .....  | 101     |
| Limitations.....   | 103     |
| Directions for Future Research.....  | 104     |
| Conclusions .....  | 105     |
| <br>References .....   | <br>106 |
| Appendix 1: Appraisal Definitions Found in the Emotion Literature.....                                     | 114     |
| Appendix 2: Study 1 Scenarios .....  | 117     |
| Appendix 3: Study 1 Questionnaire.....   | 120     |
| Appendix 4: Study 2 Questionnaire.....   | 130     |
| Appendix 5: Study 3 Scenarios .....  | 135     |
| Appendix 6: Study 3 Questionnaire.....   | 137     |

## List of Tables

|  |    |
|--|----|
| Table 1: Studies in the Research Program and their Links to Research Questions.....  | 5  |
| Table 2: Summary of Some Relevant Cognitive Appraisals as Proposed by Various Theorists .....  | 12 |
| Table 3: A Summary of Findings from Relevant Emotions Studies .....  | 25 |
| Table 4: Proposed Relationships Between Outcome Desirability and Agency of Appraised Situations, Leading to Emotions and the Extensiveness of Decision-making Processes During Purchase..... | 25 |
| Table 5: Summary Table of Decision-making Hypotheses.....  | 45 |
| Table 6: Study 1 Scenario Numbers and their Associated Grouping Variables.....   | 52 |
| Table 7: Study 1 Scale Items and Associated Reliability Measures.....  | 53 |
| Table 8: Study 1 Principal Components Analysis of Emotion Measures to Test for Discriminant Validity .....   | 54 |
| Table 9: Study 1 ANOVA Results for Appraisal Manipulation Checks.....  | 56 |
| Table 10: Study 1 Step-down MANOVA Results (p-values of multivariate F-test) .....   | 58 |
| Table 11: Study 1 Emotional Response Means Across Scenarios .....  | 60 |
| Table 12: Study 1 Correlations Between Emotions and Decision-making Variables.....   | 61 |
| Table 13: Study 1 ANOVA Results for Effects of Appraisals on Decision-making Processes .....   | 62 |
| Table 14: Study 1 Significance Levels of T-tests Between Treatment Conditions of Selected Decision-making Variables .....  | 63 |
| Table 15: Study 2 Scenario Numbers and Their Associated Grouping Variables .....   | 66 |
| Table 16: Study 2 Mean Outcome Desirability and Agency Responses Across Treatment Conditions.....  | 67 |
| Table 17: Study 2 Scale Items and Associated Reliability Measures .....  | 68 |
| Table 18: Study 2 Principal Components Analysis of Emotion Measures to Test Discriminant Validity .....  | 68 |
| Table 19: Study 2 Mediation Test Results Showing the Direct and Indirect Effects of Outcome Desirability and Agency Appraisals on Decision-making Processes .....                            | 69 |
| Table 20: Study 2 Emotional Response Means Across Scenarios .....  | 71 |
| Table 21: Study 2 Correlations Between Emotions and Decision-making Variables.....   | 71 |
| Table 22: Study 2 Nested Regression Results Showing the Significance that Each Emotion has on Explaining Relative Decision-making Effort (F-statistics and p-values).....                    | 72 |
| Table 23: Study 2 Significance Levels of Nested Regression Results Showing the Effects of Desirability and Agency Appraisals on Decision Satisfaction.....                                   | 74 |
| Table 24: Study 2 Correlations Between Appraisals and Decision Satisfaction.....   | 74 |
| Table 25: Study 2 Significance Levels of T-tests Between Treatment Conditions of Selected Decision-making Variables .....  | 76 |
| Table 26: Study 3 Scenario Numbers and Their Associated Grouping Variables .....   | 77 |
| Table 27: Correlations Between Covariates and Decision-making Variables .....  | 78 |
| Table 28: Study 3 Reliability Tests for Appraisals, Emotions, Decision-making and Covariates .....   | 79 |
| Table 29: Study 3 Principal Components Factor Loadings to Test Discriminant Validity .....   | 79 |
| Table 30: Study 3 Manipulation Checks of the Differences in Cognitive Appraisals Across experimental Conditions.....   | 81 |
| Table 31: Study 3 Step-down Analysis MANOVA Results (p-values for multivariate F-tests) .....  | 82 |
| Table 32: Study 3 Emotional Responses Across Scenarios .....   | 83 |
| Table 33: Study 3 Correlations Between Emotions and Decision-making Variables.....   | 84 |
| Table 34: Study 3 ANOVA Results for Effects of Appraisals on Decision-making .....   | 85 |
| Table 35: Summary of Support for Hypotheses Across Studies 1-3.....  | 97 |



## List of Figures

|  |    |
|--|----|
| Figure 1: Proposed Model of Appraisals Impacting Decision-making Processes.....                                    | 2  |
| Figure 2: Example of a Simple Circumplex Model of Emotions (adapted from Watson and Tellegen, 1985) .....          | 9  |
| Figure 3: A Complete Cognitive Appraisals Model of Emotions .....  | 11 |
| Figure 4: Proposed Model with Hypotheses Labelled .....  | 26 |
| Figure 5: Anticipated Relationships Between Hypothesized Appraisal Effects and Decision-making Extensiveness ..... | 44 |
| Figure 6: Directional Effects of Appraisals on Search Pattern across Study 1 Treatment Conditions.....             | 73 |
| Figure 7: Directional Effects of Appraisals on Dependent Variables Across Study 2 Treatment Conditions.....        | 85 |
| Figure 8: Directional Effects of Appraisals on Dependent Variables Across Study 3 Treatment Conditions.....        | 96 |

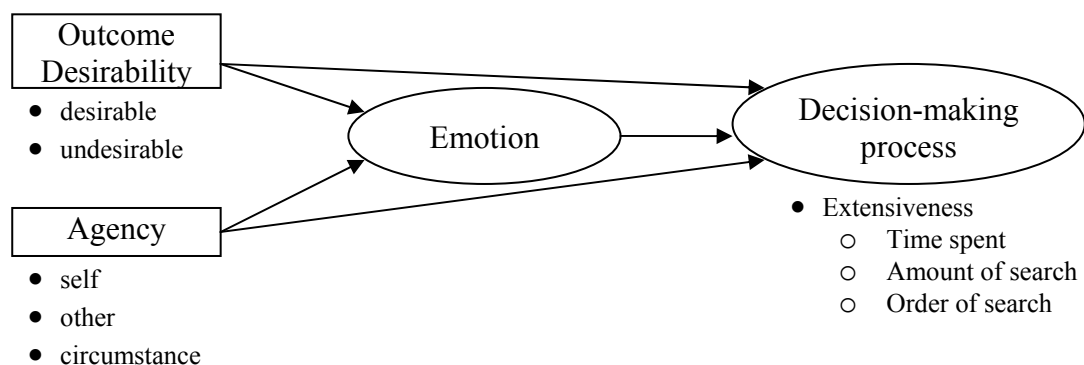
## Chapter 1: Introduction

The study of affect in decision-making has run hot and cold in the marketing literature over the years. Much past research focused on the dimensions of valence and level of arousal, characteristics of both moods and emotions, to determine affect's subsequent impact on behaviour (Mano, 1990). For many years it was generally accepted that people would engage in more systematic information processing when in negative moods and in more heuristic processing when in positive moods. However, evidence has arisen that contradicts this simplistic view. Mano (1990) applied level of arousal in conjunction with valence to explain the contradictory effects on decision-making processes, but even that has been inadequate as an encompassing answer for explaining different emotional response behaviours. In recent years psychologists have offered further evidence demonstrating that people experiencing emotions with similar valences and arousal levels (e.g. fear and anger) make different risk judgements (Lerner and Keltner, 2000) and use different heuristics (Tiedens and Linton, 2001). This sort of evidence suggests that a new way of explaining the differential effects of emotions on decision-making behaviours is needed.

Bagozzi, Gopinath and Nyer (1999) and Johnson and Stewart (2005) have offered cognitive appraisal theory as a promising avenue for pursuing the study of emotion in marketing contexts. Cognitive appraisals are evaluations of objects or events that combine to elicit emotion(s). These evaluations may occur pre-consciously or be temporally inseparable from the emotion, although studies have shown that when instructed to do so the cause of the emotion can be cognitively re-constructed (e.g., Smith and Ellsworth 1985). What is important for our purposes is not the role of cognitions *per se*, but that specific antecedent conditions (i.e., combinations of appraised dimensions) have been shown to elicit invariant emotions (Ruth, Brunel and Otnes 2002; Smith and Ellsworth 1985), which in turn affect behaviour. Lerner and Keltner (2000), for example, have shown that the two highly negative emotions of anger and fear have significantly different impacts on risk preferences: fearful

people make pessimistic judgments whereas angry people are more optimistic – an insight clearly of value to, for example, politicians. Tiedens and Linton (2001) attributed these differences to the appraised level of certainty underlying each of the emotions: fear, being future-oriented, has more uncertainty than does anger. Thus, one's perception of certainty is the antecedent condition causing fear rather than anger, or vice versa; other antecedent conditions are constant. These sorts of breakthroughs have prompted resurgence in emotion research, placing a stronger focus on the causes of emotions and their subsequent affect on behaviour. However, while recent studies have advanced our understanding of the influence of cognitive appraisals on emotions and consumer behaviour, findings remain disjointed and without an encompassing theory.

This research tests the theory that the cognitive appraisals of outcome desirability and agency interact to elicit varying emotions which shape subsequent consumer decision-making processes (Figure 1). While it is well-established that outcome desirability (i.e. how desirable or undesirable an event's outcome is perceived to be) accounts for the majority of variance in distinguishing between emotions (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985), it is also recognized that it is inadequate for explaining subsequent response behaviours (cf. Lerner and Keltner, 2000; Raghunathan and Corfman, 2004; Raghunathan and Pham, 1999; Rucker and Petty, 2004; Tiedens and Linton, 2001). Ruth, Brunel and Otnes (2002) found that agency related appraisals account for the next largest amount of variance when



**Figure 1: Proposed Model of Appraisals Impacting Decision-making Processes**

distinguishing between emotions (i.e. distinguishing between emotions of the same valence). Agency appraisals relate to whom or what is the perceived cause of an event (i.e. oneself, someone else, or circumstance). Consistent with their underlying agency appraisals, angry people have been shown to be more likely to blame someone else for a subsequent negative event, while sad people are more likely to blame the situation (Keltner, Ellsworth and Edwards, 1993). In a marketing context, agency has been shown to impact post-purchase behaviour (Folkes, Koletsky and Graham, 1987). Folkes (1988) argues that agency should also play a significant role at the beginning of the decision-making process, warranting future study. It is believed that directing focus towards emotions' second most influential cause will more fully explain the decision-making processes used in consumer choice contexts.

Because appraisals are cognitively based, they should impact behaviour not just indirectly through emotion (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985), but also directly through cognition (Folkes, 1988; Shiv and Fedorhikin, 1999). Therefore, I intend to extend the study of appraisal effects on consumer behaviour by considering both their direct impacts on decision-making processes and their indirect affective impacts through emotion. I believe that using cognitive appraisals as a foundation for predicting emotional response behaviours will enhance predictive ability and advance our understanding of consumer decision-making in emotionally charged purchase situations.

Accordingly, this research attempts to add to the literature by addressing the following two research questions.

1. Does agency combine with outcome desirability to offer a more complete explanation of the effects of emotions on decision-making processes?
2. To what extent do emotions mediate the influence of outcome desirability and agency appraisals on decision-making processes, relative to their direct effects?

The first question seeks to determine whether outcome desirability and agency combine to offer an improved explanation of the differential impacts of emotions on decision-making processes than other theories. In particular, it seeks to determine whether the cognitive appraisal of agency explains differences in decision-making processes that occur among emotional states of the same valence. In some instances it is also possible that these emotions could have similar arousal levels (e.g., guilt and anger, or appreciation and pleasant surprise).

Researchers of late have been fixated on the mediating role of emotions in decision-making, when cognition also clearly plays a role (Folkes, Koletsky and Graham, 1987). Now that “the powerful influence of affect” (Lerner and Keltner, 2000, p. 473) has been established, it is time to return to a balanced study of decision-making by reconsidering the role of cognition, which is what the second question addresses.

The theoretical contributions of this paper are threefold. The first is to establish the effect that agency has on consumer decision-making processes. While outcome desirability and other appraisal dimensions such as certainty have been studied in combination to this end, I believe that agency will provide a more thorough explanation of differences in decision-making processes than other theories to date. Second, it will also consider the extent to which decision-making processes that are relevant to marketers, such as time spent and information searched, are directly affected by agency and outcome desirability versus being mediated by the emotions they evoke. In so doing, the third and most significant contribution is an attempt to explain conflicting results in the literature about how affect influences decision-making processes.

Research questions will be tested through a series of three studies, each of which is designed to address both research questions (Table 1). The first uses vignettes and an experimental design. The second uses critical incidents and a quasi-experimental design. The third is a replication of the first that was added after the first two studies were completed, employing relaxed experimental controls intended to make the vignettes more realistic and to

**Table 1: Studies in the Research Program and their Links to Research Questions**

|         | Research Question | Design  | Consumption context         | Instrument  | Analysis                                     |
|---------|-------------------|---|-----------------------------|---|--|
| Study 1 | 1 and 2           | 2x3 experiment using vignettes  | Mobile telephone repurchase | On-line questionnaire measuring appraisals and emotions and decision matrix tracking observed decision-making process | Step down MANOVA and individual ANOVAs       |
| Study 2 | 1 and 2           | 2x3 quasi-experiment using critical incidents                               | Past automobile purchase    | On-line questionnaire measuring remembered appraisals, emotions and decision-making process                           | Step down regressions and nested regressions |
| Study 3 | 1 and 2           | Study 1 replication<br>2x3 experiment using vignettes with relaxed controls | Mobile telephone purchase   | On-line questionnaire measuring appraisals and emotions and decision matrix tracking observed decision-making process | Step down MANOVA and individual ANOVAs       |

increase manipulation strengths and corresponding effect sizes. In the first and third studies, participants are asked to go thorough the decision-making process for purchasing a new mobile telephone. The decision-making process is tracked in terms of time spent, amount and order of information viewed. The second study asks participants to report on their decision-making process during a past automobile purchase. Mediation analysis is done on each set of study data to answer research question two. To address the first research question, individual analyses are used to determine whether each of the six appraisal combinations has an effect on consumer decision-making, either directly or indirectly through the mediating effects of their corresponding emotional responses.

The next section will review the literature and provide a conceptual framework for the research. It will outline where this study fits into the current literature and will provide foundations for the study's hypotheses. The hypotheses will then be outlined, followed by details of the methods with which they were measured and tested. Results will be reported and discussed. Finally, limitations of the research will be addressed and directions for future research proposed.

## **Chapter 2: Literature Review**

The influence of affect on decision-making processes and outcomes has been widely studied. However, we remain unable to adequately explain how different emotions (particularly of the same valence and arousal levels) impact decision-making processes. This section considers the various approaches to the study of emotions, and then continues on to assemble a variety of findings regarding how emotions influence decision-making processes and outcomes. While the focus of this study is primarily on how different emotions influence the extensiveness of consumer decision-making processes, it is useful to look at some of the other dependent variables that have been studied (e.g., judgment, coping strategies) with respect to emotions in order to provide perspective for the study at hand. The literature presented here is used to define critical terms used throughout this study, and to build the conceptual foundations needed for hypothesis development.

### **Distinguishing Affect, Mood and Emotion**

Affect is an umbrella term comprised of feeling processes such as emotions, moods, and (more controversially) attitudes (Bagozzi, Gopinath and Nyer, 1999). Cohen and Areni (1991) broadly define affect as “valenced feeling states”, which includes moods and emotions but excludes attitudes. Attitudes are generally considered to be evaluative judgments, but many argue that they have both affective and cognitive components (Shiv and Fedorikhin, 1999). This study considers the cognitive and affective elements of evaluations separately. Thus, for the purposes of this paper, attitudes will be excluded from the definition of affect.

Moods and emotions are more often compared than defined (Gardner, 1985). Frijda (1986) proposes the “globality-focality” distinction between moods and emotions, where moods are more global and diffused feeling states than are emotions. Emotions are typically more intense than moods and less enduring. Importantly, they are tied to a specific referent, and instigate specifiable response behaviours (Bagozzi, Gopinath and Nyer, 1999). While moods are generally thought of in terms of valence, being positive or negative, individual

emotions are defined much more expressly within the positive and negative domains. This research seeks insight with respect to differences within these positive and negative domains. Because moods do not have more specific subclasses beyond their general positive and negative valences, moods will not be considered within the scope of this study.

### **Approaches to Studying Emotions**

There are three generally accepted approaches to studying emotions in the marketing field: categories, dimensions, and cognitive appraisals, the latter derived from an existing coping theory.<sup>1</sup>

#### ***The Categories Approach***

This categories approach does not attempt to determine the causes of emotions so much as group emotions based on their similarities. For example, Plutchik (1980) proposed eight basic categories of emotion in which one “basic” emotion (e.g. anger) is used as an exemplar to determine what other emotions should be grouped in that category. Alternatively, Shaver et al. (1987) use a series of complex empirical techniques to group emotions. This approach has been applied in the marketing field by such authors as Batra and Ray (1986) and Batra and Holbrook (1990) to demonstrate that affective responses influence attitudes towards advertisements. However, these categories are collections of emotions that do not attempt to describe similarities and differences between emotions within each category. A relevant marketing example of one study that groups emotions that have different subsequent behavioural effects would be that Shaver et al. (1987) group satisfaction and delight as two emotions in the “joy” category and as such one would expect them to lead to similar behaviours. Yet many marketers have demonstrated that customer satisfaction and customer delight can lead to different subsequent buyer behaviour (Rust and Oliver, 2000). While many would argue that satisfaction is not an emotion at all, it was labelled and grouped as

---

<sup>1</sup> As Smith and Ellsworth (1985) point out, these approaches are not mutually exclusive. Some overlap does exist between the various approaches. For example, Plutchik (1980) uses appraisals as a basis for a categorical approach to emotional classification, while Havlena and Holbrook’s (1986) study of consumption emotions demonstrated overlap between the categories and dimensions approaches.



such by Shaver et al.'s (1987) empirical work. This example provides a simple illustration of this approach's limited use in explaining what underlying building blocks make various emotions distinct in how they influence subsequent behaviour.

### ***The Dimensions Approach***

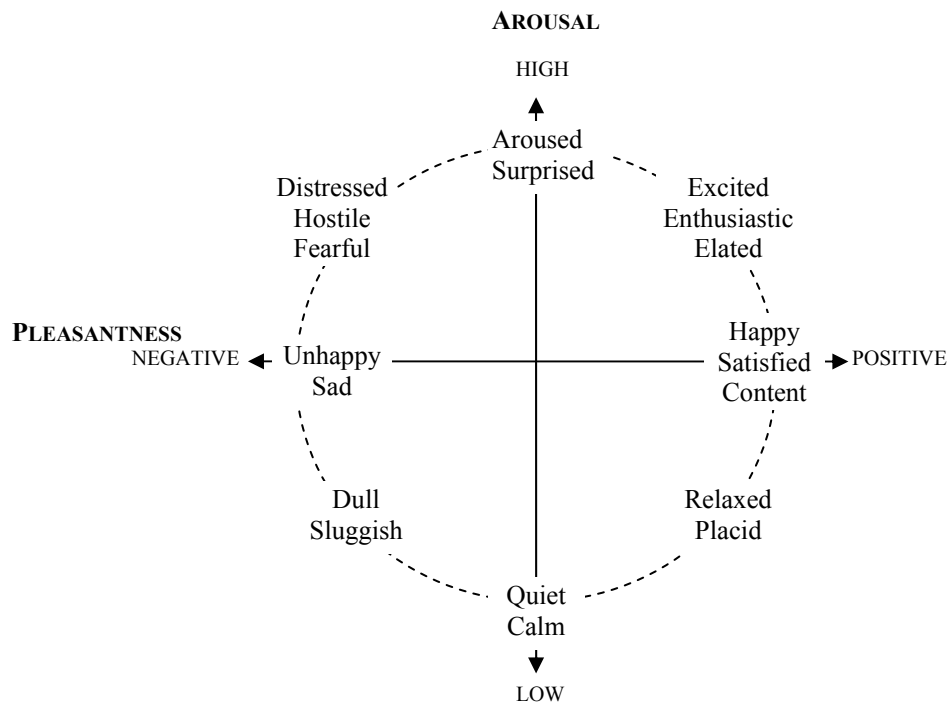
Dimensions are inherent elements of feeling states, qualities that all feelings have. The dimensions approach distinguishes between emotions using the dimensions of valence and arousal (Mano, 1990). Valence is a continuum from positive to negative, while level of arousal ranges from high to low. All feeling states have some valence and arousal level. The dimensions may be illustrated as orthogonal axes around which different emotions are expressed as points in a circle (see Figure 2 for an example).<sup>2</sup> Havlena and Holbrook (1986) pitted this approach to the study of emotion against the categories approach, finding that the former "... is probably more useful than Plutchik's scheme for positioning consumption experiences in an emotion space..." (p. 402). However, the dimensions approach, while parsimonious, is limited in its ability to distinguish "focally" between emotions of similar valence and arousal levels, such as the highly negative emotions of shame, fear and anger. Thus, additional dimensions have been advanced, notably dominance, which deals with the level of felt control in a situation, but empirical support has been equivocal (Mehrabian and Russell 1974).<sup>3</sup>

This approach has dominated the study of affect in the marketing literature (Holbrook and Batra, 1987; Mano and Oliver, 1993; Pham, 1998; Westbrook, 1987; Westbrook and Oliver, 1991); however, it has lost favour in the psychology literature. A possible reason for its diminishing popularity is the dimensions approach's previously mentioned limited ability to distinguish between emotions of similar valence and arousal levels. While the dominance dimension has been offered as one means for dealing with the focality issue, a third approach,

---

<sup>2</sup> Watson and Tellegen's (1985) Circumplex Model of emotions is a more complex variation using four dimensions of positive affect (high/low), negative affect (high/low), pleasantness (pleasant/unpleasant), and engagement (strong/weak) to plot, and thus distinguish, various emotions.

<sup>3</sup> One possible reason for the inconsistency of this finding is that felt control may be an *appraisal* that is only relevant to *some* emotions rather than being a dimensional element inherent in *all* emotions.



**Figure 2: Example of a Simple Circumplex Model of Emotions (adapted from Watson and Tellegen, 1985)**

the cognitive appraisals approach, offers a more in-depth way to explain these more subtle nuances of emotions. Authors such as Bagozzi, Gopinath and Nyer (1999) and Johnson and Stewart (2005) have suggested that this approach is a more promising avenue for studying emotions in consumer research.

### ***The Cognitive Appraisals Approach***

Appraisal theory has existed for decades, but was revived by Richard Lazarus and colleagues in the 1980s (Folkman et al., 1986; Folkman and Moskowitz, 2000, 2004; Lazarus, 1966, 1991; Lazarus and Folkman, 1984, 1987) to explain coping responses to stressful situations. Their theory states that primary appraisals of situations lead to emotions that are classified as benign-positive, neutral, or stressful. If a situation is deemed stressful, secondary appraisals are used to assess coping strategies for alleviating the negative affective responses related to the stressful event.

Cognitive appraisal theory was applied to studying the composition of emotions in the psychology literature in the mid 1980s. It differs from the dimensions approach in that it uses

evaluative criteria to predict which emotions are elicited rather than describing the inherent qualities of the emotions themselves. This approach to studying emotions uses primary appraisals of stimulus events to explain which specific emotions are elicited by those events. In other words, evaluations of underlying causes or aspects of situations will determine which emotional responses are elicited by those events.<sup>4</sup> Different people often experience widely varying emotional reactions to similar objects and events. These differences may be accounted for by differing appraisals of the situation at hand. For example, the winner and loser of a sporting event will probably have very different interpretations of, and emotional responses to, the same stimulus event.

Appraisals differ from dimensions in that they are interpretations of objects or events that will combine to generate particular emotions, while dimensions are inherent aspects of emotions themselves. For example, pride always has an inherently positive emotional valence. However, winning a sporting event may not always be interpreted positively or elicit pride. Someone who has cheated to win an event may instead feel guilt or shame. More sophisticated than the dimensions approach, the appraisals approach has achieved success empirically in explaining focal differences between emotions (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985). Specifically, this study looks at differences in pride, appreciation, pleasant surprise, guilt, anger, disappointment and sadness.

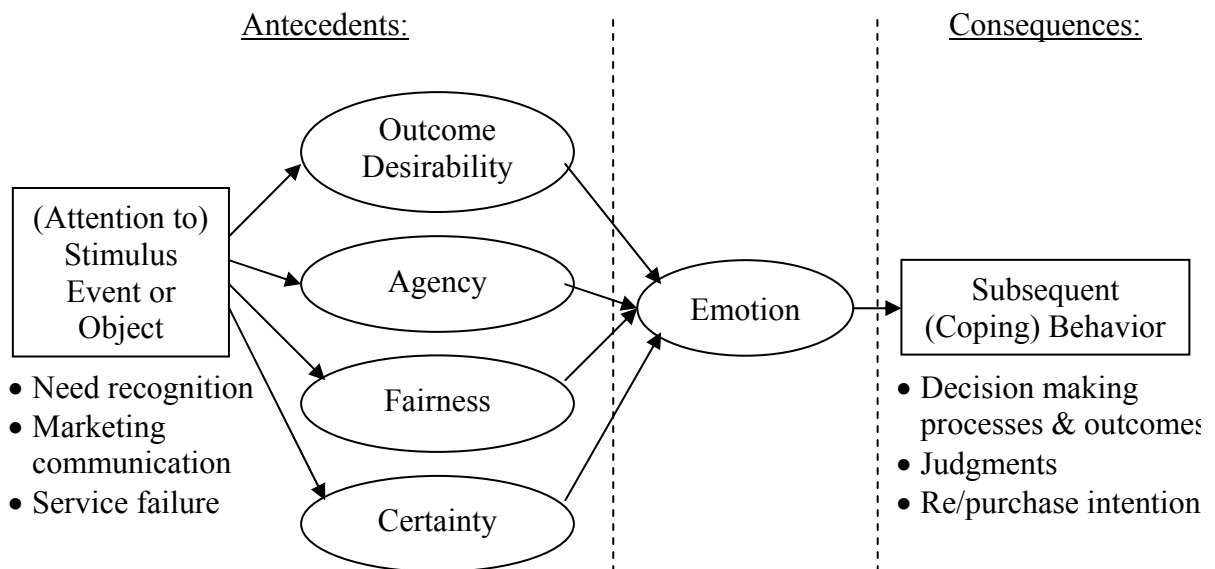
### **How Cognitive Appraisals Elicit Emotions**

Many “independently developed, yet highly convergent” (Scherer, 1988, p. 91) theories have been proposed regarding what underlying appraisals impact emotions (Frijda, 1986; Ortony, Clore and Collins, 1988; Roseman, 1984, 1991; Smith and Ellsworth, 1985; Scherer, 1988; Weiner, 1985). Several recurrent themes are evident (Frijda, 1986; Roseman, 1991; Smith and Ellsworth, 1985; Scherer, 1988). “Several dimensions – valence or pleasantness-

---

<sup>4</sup> It may be argued that these evaluations occur instantaneously, without clearly conscious processing. As such, this researcher does not believe that the cognitive appraisal approach contradicts the preconscious school of thought regarding emotions.

unpleasantness, certainty, controllability, and agency or responsibility – are found in most or all analyses” (Frijda, 1987, p. 116). All of these appraisals will be examined in order to demonstrate which appraisals are most likely to affect consumption related emotions and behaviours, and thus justify the appraisals chosen for inclusion in this study’s model. Some authors have also offered attention (Smith and Ellsworth, 1985) and coping potential (Scherer, 1988) as appraisal dimensions; later discussion will also describe why they are not included in this model. Figure 3 represents a model of some commonly recurring cognitive appraisals as seen in the literature. Table 2 provides a summary of some frequently cited appraisals that impact on emotions, using the varying terminology provided by the authors<sup>5</sup>. An interpretation of these cognitive appraisals and their relative influences emotion and behaviour follows.



**Figure 3: A Complete Cognitive Appraisals Model of Emotions**

<sup>5</sup> For definitions of the various terms provided by the different authors for all of the appraisals listed in Table 2, please see Appendix 1.

**Table 2: Summary of some relevant cognitive appraisals as proposed by various theorists**

|                                | Outcome Desirability    |  | Agency             |                          | Fairness                | Certainty                        | Attention      | Coping potential                |
|--------------------------------|-------------------------|--|--------------------|--------------------------|-------------------------|----------------------------------|----------------|---------------------------------|
|                                | Pleasantness            | Goal Consistency   | Agency             | Intention                |                         |                                  |                |                                 |
| Psychology Literature          |                         |  |                    |                          |                         |                                  |                |                                 |
| Frijda (1987)                  | valence or pleasantness | open/closed  | self/ other intent |                          | value relevance         | certainty                        | expectedness   | modifiability, coping potential |
| Ortony, Clore & Collins (1988) | appealingness           | desirability   | agency             |                          | blameworthiness         | likelihood, prospect realization | unexpectedness |                                 |
| Roseman (1991)                 | appetitive/ aversive    | motive consistency                                       | agency             |                          | (legitimacy)            | certainty                        |                | Power                           |
| Scherer (1988)                 | intrinsic pleasantness  | goal-related valence, goal relevance, goal consistency   | agent cause        | motive cause             | compatibility standards | (probability)                    | novelty        | coping potential                |
| Smith & Ellsworth (1985)       | pleasantness            | (perceived obstacle or goal/path obstacle)               | self/ other agency | situation/ human control | (legitimacy)            | certainty                        | attention      | anticipated effort              |
| Marketing Literature           |                         |  |                    |                          |                         |                                  |                |                                 |
| Nyer (1997)                    | goal congruence         | goal relevance   | attribution        |                          |                         |                                  |                | coping potential                |
| Ruth, Brunel and Otnes (2002)  | pleasantness            | perceived obstacle                                       | self/ other agency |                          | situational control     | fairness                         | certainty      | Attentional activity            |
| Johnson and Stewart (2005)     |                         | direction and degree of goal congruence, goal importance | agency             |                          |                         | normative/ moral compatibility   | certainty      |                                 |

Terms in parentheses represent appraisals that were presented conceptually but subsequently unsubstantiated empirically.

### ***Outcome Desirability***

Outcome desirability, sometimes referred to as pleasantness, is widely regarded as the most fundamental appraisal of stimuli. Pleasantness, which has strong empirical links to valence, refers to the initial cognitive appraisal of whether the outcome of a situation is good or bad (positive or negative) with respect to personal outcomes.<sup>6</sup> It may be differentiated from valence in that valence is an inherent dimension of a feeling, whereas pleasantness is a cognitive assessment of whether a situation is good or bad relative to some benchmark.<sup>7</sup> It accounts for the majority (as much as 88%) of variance explained in attempts to categorize emotions (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985). However, as has been discussed, many theorists do not believe that positive/negative appraisals alone are particularly diagnostic when attempting to distinguish between specific emotions (Roseman, 1991; Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985). While the existence of positive and negative outcomes remains undisputed, other stimulus appraisals combine with the pleasantness appraisal to evoke particular emotions.

Some theorists argue that the positive or negative evaluation of a stimulus is actually a function of its consistency (or inconsistency) with achieving one's goals (Johnson and Stewart, 2005; Roseman, 1991; Scherer, 1988). Thus, they believe that goal consistency may be a more accurate description of the appraisal that leads to positive/negative assessments of situations. Insofar as happiness may be considered to be the ultimate goal of all people, every event may be related to goal achievement. However, that perspective considers the term goal in a much broader sense than its common usage. This author believes that stimulus events need not always be relevant to goal achievement in order to be evaluated positively or negatively. For example, unexpectedly running into an old acquaintance on the street may be

---

<sup>6</sup> The pre-cognitive school of affect research argues that an initial feeling state (a general positive or negative affective response to a stimulus) is actually used as an input to primary appraisals (Zajonc, 1980). In fact, this can be seen to be consistent with the appraisals view that the most powerful appraisal influence comes from pleasantness (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985).

<sup>7</sup> Gap theories suggest that this benchmark may be a social comparison or an ideal, while systems theories would argue that it is a goal (Averill and More, 1993).

either a pleasant or unpleasant experience that is unrelated to personal goals. Other theorists have introduced an appraisal of goal relevance in conjunction with goal consistency to account for the fact that not all events are goal-related (Johnson and Stewart, 2005; Nyer, 1997). To further illustrate that not all situations are goal relevant, Smith and Ellsworth (1985) found that goal consistency was related to the pleasantness of a situation, but it was not its only determinant. Similarly, Ruth, Brunel and Otnes (2002) found pleasantness to be the most powerful discriminating factor between emotions over a perceived goal obstacle appraisal. This combined evidence would suggest that goal consistency is not the only determinant of whether a situation is deemed to be desirable or undesirable. Accordingly, both goal consistency and pleasantness may help to determine whether a particular event is positive or negative with respect to one's current circumstances.

For clarity, the term outcome desirability (derived from Ortony, Clore and Collins, 1988) is used in this paper to encompass the overall interpretation of how positive or negative (desirable/undesirable) a situation is relative to some relevant personal benchmark, whether it be driven by goals or a more general interpretation of pleasantness. Thus, to reflect how other authors have used these terms, pleasantness and goal consistency are represented as elements of the outcome desirability appraisal in Table 1, as indicated by the dashed line. This paper will focus on the overarching appraisal of outcome desirability and its role in determining emotional responses. To facilitate understanding, the term outcome desirability will be used from this point forward when discussing this appraisal, regardless of the terminology used by the original author.

It is proposed that the outcome desirability appraisal is cognitive but that it also instigates a felt emotion, both of which may influence subsequent behaviour. It is possible that outcome desirability not only influences decision-making indirectly through its impact on emotions, but also more directly through its cognitive element. Much of the literature in marketing to date has only considered the dimensional effect of the positive or negative valence of affect

on marketing, rather than considering the underlying effects driving consumption-related emotions (see Westbrook, 1987 and Garbarino and Edell, 1997 for exceptions). Because outcome desirability drives the separation of emotions into positive and negative domains and accounts for the majority of variance in felt emotions, it must be included in any model relating to the study of emotion, including this one. However, it is the appraisals that influence the specific emotions within the positive and negative domains that are the key focus of this study.

### *Agency*

The next appraisal that has been shown to influence emotions is agency (Ortony, Clore and Collins, 1988; Roseman, 1991; Smith and Ellsworth, 1985). This appraisal was drawn from attribution theory, the study of causal inferences (Folkes, 1988; Weiner, 1986), for use as an emotional determinant. The causal agent is who or what caused the stimulus event. The agent may be perceived by the appraiser to be oneself, someone else, or circumstance (Ortony, Clore and Collins, 1988; Roseman, 1991; Smith and Ellsworth, 1985). However, attribution theory also purports a dimension related to controllability or intention (whether an agent had control over or intentionally committed an act).<sup>8</sup> For example, when someone is blamed for an event and anger ensues, there is an implication that the angry party believes the responsible party could have acted differently to avoid the outcome; otherwise, an emotion such as frustration may occur instead. Because many appraisal theorists do not separate these two aspects of attribution in their definitions of the agency appraisal, this study adopts the traditional agency term along with its broader attributional definition that encompasses both the agent and its perceived intent for use in this paper. For brevity, when an event is perceived to be caused by one of the three agents, henceforth it will be stated that it is self-caused, other-caused, or circumstance-caused.

---

<sup>8</sup> Weiner (1985, 2000) also theorizes a third dimension of attribution, stability, along with locus of causality (agency) and controllability (intention). Stability considers temporal duration of a problem and whether it is expected to recur in the future. This dimension has been used in studies of product failure (Oliver, 1993), service failure (Folkes, Koletsky and Graham, 1987), and satisfaction (Bitner, 1990).



Ruth, Brunel and Otnes (2002) found that appraisals of causal agency, intention, and fairness combine to explain the second highest amount of variance (5.4%) in consumption emotions after outcome desirability. While this effect may seem small, it is important to consider that while outcome desirability puts emotions into the two broad categories of desirable and undesirable, it is combination of agency-related appraisals that have the greatest effect on which specific emotions emerge within the desirable/undesirable category. These findings support Smith and Ellsworth's (1985, p.835) claim that "the situational control dimension...is essential for understanding the unpleasant emotions. [In] discriminating among the fundamental unpleasant states...the situational control dimension is almost as crucial as all of the dimensions combined." The findings are also consistent with Ortony, Clore and Collins' (1988, p. 56) argument that compound attribution/well-being emotions are evaluated with respect to both goals *and* standards, where the standards associated with attribution emotions includes agency, intention and fairness dimensions (see Appendix 1). In line with Ruth, Brunel and Otnes (2002), this author believes that agency will have a significant effect on which specific desirable or undesirable consumption emotions are evoked, and will correspondingly impact subsequent decision-making processes.

Agency appraisals are grounded in attribution theory, a cognitively driven theory of causal inferences. It argues that these inferences directly influence people's behaviours by considering cause and consequence, without being impacted by emotions.<sup>9</sup> Therefore, there should be a direct cognitive link between agency appraisals and decision processes. However, as a primary appraisal agency is shown to cause emotional responses (Roseman and Evdokas, 2004), which in turn have been shown to influence behaviour (Yi and Baumgartner, 2004). In keeping with a dual process impact, Folkes, Koletsky and Graham (1987) found that attribution influenced the desire to complain and repurchase intentions both directly through

---

<sup>9</sup> Smith et al. (1993) took the view that attribution is separate from cognitive appraisal, and that it precedes cognitive appraisals in eliciting emotions. While the theoretical interpretation of their findings may be disputed on methodological grounds, the study further demonstrates the significant impact that agency has on emotions.

cognitive processes and indirectly through anger. Other authors have linked both cognitive responses and negative emotions such as anger to behavioural outcomes in the service industry such as dissatisfaction and lower evaluations of recovery efforts (cf. Smith and Bolton, 2002). Stephens and Gwinner (1998) proposed a cognitive appraisals model for predicting a failure to complain in the face of service failure that included outcome desirability and agency along with coping potential and future uncertainty as determinants of negative emotions such as anger, fear, guilt and sadness. Anger, guilt and sadness are all undesirable emotions that are associated with agency appraisals. Therefore, this research proposes that agency appraisals will influence consumer behaviour directly through their cognitive components, while also being mediated by emotional responses.

### ***Fairness***

Fairness deals with how morally appropriate or fair one perceives an event to be (Frijda, 1986; Scherer, 1988; Smith and Ellsworth, 1985). It is linked strongly to the concept of justice, another stream of literature that has regained popularity in psychology research (Skitka and Crosby, 2003). Because appraisals may be made of both past and future events, fairness may relate to what may be classified as retributive justice and positive justice. When looking at past events, Darley and Pittman (2003) propose that retributive justice is linked strongly to agency. They propose that moral outrage against wrongdoing increases based on the intention aspect of agency. Accidental, negligent and intentional harm (attributable to specific agents) lead to increasing levels of outrage and perceptions of fair retribution. The fairness appraisal, therefore, has a strong link to agency in terms of its ability to explain people's expectations for behavioural responses to stimulus events. Fairness's contribution to the cognitive appraisals model of emotions is largely a theoretical one. While fairness will be measured in this study, it is presumed that its effects will be highly correlated with the agency appraisal; thus in order to keep the model parsimonious, it is not included as a construct in this study's model.

### ***Certainty***

Certainty represents the perceived likelihood of a particular outcome and its impact on emotion (Smith and Ellsworth, 1985; Frijda, 1987; Roseman, 1984). This appraisal is clearly more relevant to future events than to past ones. How certain someone is about a future outcome will influence how they feel about it. High levels of uncertainty, for example, are most strongly associated with the emotions of fear and hope. Tiedens and Linton (2001) considered the impact of certainty related emotions on information processing. They found that subjects were more likely to engage in stereotyping, pay less attention to argument quality, and rely more on experts, factors presumably indicative of heuristic processing, when emotions were associated with certainty. However, not all situations that are appraised are anticipatory in nature. In situations that have already occurred certainty is not always a particularly relevant emotional determinant. While Ruth, Brunel and Otnes' (2002) study of the impacts of appraisals on consumption emotions did find certainty to be statistically related to various consumption emotions, it was overpowered by other appraisals (most notably outcome desirability and agency) in their multiple discriminant analysis. Thus, while I will measure the impact of certainty in this study, I am proposing that outcome desirability and agency will be more influential in explaining the effects of cognitive appraisals on consumer decision-making processes.

### ***Attention***

Consistent with Lazarus' (1966, 1991; Lazarus and Folkman 1984) appraisal theory, the following two proposed appraisals, attention and coping potential, are best thought of as peripheral to the derivation of emotions. Attention often refers to the focusing of one's consciousness and receptivity, generally as a result of a stimulus being unusual. Arguably, representing attention as an appraisal dimension contradicts the essence of appraisal theory: one must attend to a stimulus, be it consciously or otherwise, in order to appraise it. Lazarus (1966, 1991; Lazarus & Folkman 1984) asserts that all environmental stimuli are appraised

with respect to their potential impact on the appraiser. Of relevance to appraisal theorists, Ruth, Brunel and Otnes (2002) did not find attention to usefully contribute to differentiating emotions. Thus, it is posited that attention precedes the appraisal process, while coping potential may be interpreted as following the initial emotional response.

### ***Coping Behaviours***

Coping behaviours, derived from Lazarus' (1991) coping potential appraisal, are associated with one's perceived ability to cope with or change a situation. Once stimuli have been attended to and appraised, they fall into three general categories: benign-positive, neutral, and stressful (Lazarus 1991). A key determinant of whether something is positive, neutral or stressful is the emotion elicited by it. Stressful situations may be past harms, future threats or future challenges. A stimulus will be further attended to (secondarily appraised) if it is seen as stressful (or potentially so) and requiring some form of coping strategy.<sup>10</sup> Smith and Ellsworth's (1985) results indicate that attention is empirically related to the desire to *continue* attending to a stimulus that has elicited a negative emotion, which may be connected more appropriately to a secondary coping appraisal. Thus, whether coping is necessary seems to occur after some initial cognitive appraisal and its associated emotional response.

Coping is generally associated with negative emotions. The only exception lies in future challenges, which may be viewed as positive (Folkman and Moskowitz 2000). Smith and Ellsworth (1985) provided supporting evidence. Anticipated effort separated emotions into two positive and negative clusters, which were associated with low and high effort respectively, with two exceptions: challenge (a positive emotion associated with high effort) and boredom (a negative emotion associated with low effort). However, these emotions may be distinguished using other existing appraisals. Ruth, Brunel and Otnes (2002) found that certainty had the same differentiating impact on emotions as coping potential. Accordingly,

---

<sup>10</sup> Coping may be viewed as dispositional or situational; however, it has been suggested that it may not be useful to attempt to predict how people will cope with particular situations by considering dispositions (Carver and Scheier, 1994).

there is not enough supporting evidence to suggest that coping is a necessary differentiating appraisal dimension to include within cognitive appraisal theory; it is best thought of as a consequence of an emotion.

Lazarus and Folkman (1984) suggested there were two general types of coping behaviors used to deal with stressful situations. Problem-focused coping considers negative emotions to be incentives to manage the source of the stressful emotional experience, whereas emotion-focused coping involves efforts to manage or avoid the emotion itself. Later they proposed that problem-focused coping related to situations that were perceived to be changeable (threats or challenges), while emotion-focused coping related to situations that had passed (harms) and were viewed as unchangeable (Lazarus and Folkman 1987). These two types of coping were said to be independent and to even co-occur when dealing with stressful situations, which may help to explain Luce, Bettman and Payne's (1997) finding that negative emotions lead to mixed choice strategies.<sup>11</sup>

Coping literature may be consulted to provide meaning for why particular decision making processes and behaviours occur. For example, Yi and Baumgartner (2004) demonstrated that distinct coping strategies were used in response to situations prompted by different agency appraisals. Anger, an undesirable other-caused emotion, led to confrontive coping (a strong form of problem-focused coping) which comprises "aggressive efforts to alter the situation..." (Yi and Baumgartner 2004, p. 306). This could imply that more effort would be expended, with more time spent and information searched, when making decisions related to altering the situation. However, it is important to note that coping strategies are inferred by examining processes and behaviors. As such, circular reasoning occurs when mapping observed decision processes/behaviours to coping styles (Carver, Scheier and Weintraub 1989; Park and Folkman 1997).

---

<sup>11</sup> A third type of coping, meaning-focused coping, relates to looking for meaning in adversity and assigning causal attributions for an event (Park and Folkman, 1997). Social coping has also been offered as a way to deal with negative events, but has significant overlap with the three previously defined styles (Carver, Scheier and Wientraub, 1989).

### ***Applying Appraisal Theory to Consumer Decision-making Processes***

The cognitive appraisals approach has recently been adopted in the marketing literature to study consumption emotions and their effects on post-purchase behaviours (Nyer, 1997; Yi and Baumgartner, 2004), as well as in the psychology literature to demonstrate that different emotions of the same valence and arousal level can differentially impact risk judgments (Lerner and Keltner, 2000; Raghunathan and Pham, 1999) and the use of heuristics (Tiedens and Linton, 2001). Unfortunately, these studies use different conceptual approaches to studying how appraisals affect subsequent behaviour, meaning that no single theory has been developed. This study expands on current work by considering existing findings both in the dimensions and appraisals fields and attempting to explain differences that have been found in consumer decision-making behaviour by determining how outcome desirability and agency appraisals influence consumer decision-making processes both directly through their cognitive elements and indirectly through their emotional effects.

### **Attribution Theory, the Agency Appraisal and Consumer Decision-making Processes**

The agency appraisal is derived from the attribution literature; therefore, it is useful to have an understanding of how attribution theory has previously been applied in the emotions and decision-making literatures. Attribution has been found to be more influential in situations involving negative emotion than positive emotion (Peeters and Czapiniski, 1990), and in response to failure over success (Weiner, 2000), because unexpected or negative events are more likely to generate attempts to explain why the event has occurred (Folkes, 1988; Weiner, 2000). In keeping with a negative focus, Lerner and Keltner (2000) suggest that research into the impact of blame on judgment and choice could be extended by looking at emotions on opposite poles of the self-other responsibility spectrum, such as anger and shame. Attribution is generally applied in marketing to past purchase decisions in terms of product and service failures (Folkes, Koletsky and Graham, 1987; Yi and Baumgartner, 2004), as opposed to its impact on future decisions (as recommended by Folkes, 1988). For example,

attribution has been linked to different coping strategies in response to product failures (Yi and Baumgartner, 2004). Also, attributing blame and anger toward a firm is more likely to lead to complaint behaviour and switching than if service failure is interpreted as circumstantial (Folkes, Koletsky and Graham, 1987). This example provides support for focusing on the impact that the agency appraisal has on consumer decision-making processes.

### **How Emotions Influence Consumer Decision-making Processes**

There are two general categories of affect that are recognized by psychologists in a decision-making context (Loewenstein and Lerner, 2003). The first, called integral affect, deals with affect that is directly relevant to the situation at hand. For example, Luce, Bettman and Payne (1997; see also Nyer 1997) examined the effect that negative emotion generated by the decision task (subjects were asked to choose one poverty-stricken child to support from a set of five children) had on decision strategy. Incidental affect, on the other hand, is not caused by the situation at hand. Consider a person en route to purchase a mobile phone. When going to the store they unexpectedly run into an old acquaintance. It is entirely possible such a chance encounter could evoke an emotion, perhaps happiness or anger. Left unchecked, the emotion could affect subsequent decision making behaviours (Lerner and Keltner 2000). The affect as information model (AIM) suggests that emotions are used as a “how do I feel about it?” heuristic when making a decision (Pham, 1998; Schwarz, 1990). When the emotions are consciously recognized as being incidental (e.g., I am upset because I ran into an acquaintance, not because of the options in the choice set), they do not affect evaluation (Gorn, Goldberg and Basu 1993; Pham, 1998). However, when not consciously recognized – a reasonable assumption in many emotionally charged situations – there is no clear evidence to suggest that the effect of emotions on behaviour is any different whether they are integral or incidental to the task at hand. Perspectives currently advanced in the marketing literature do not adequately address incidental emotions, thus restricting the scope of emotions research

in this field, an issue detrimental to theory development (Zaltman, Lemasters and Heffring 1982).

Positive and negative emotions are often associated with divergent or asymmetric behaviours: negative emotions can lead to more active attempts to change a situation, whereas people generally seek to preserve positive emotions through maintenance (Taylor, 1991). Thus, negative emotion's effect on decision-making has been more widely studied than the effect of positive emotion (cf. Lerner and Keltner, 2000; Raghunathan and Pham, 1999; Yi and Baumgartner, 2004). Historically it had been agreed that negative affect leads to systematic processing (more time taken and more information searched), while positive affect leads to more heuristic processing (less time spent and information searched) (Tiedens and Linton, 2001). However, authors continue to uncover evidence that contradicts this stance (Mano, 1990).<sup>12</sup>

Until recently, the dimensions approach dominated the study of affect and decision-making; thus, valence and (to a lesser extent) arousal were the two constructs driving its study, implying that all highly negative emotions should lead to similar decision-making processes. However, findings show that different emotions with similar valences (and levels of arousal) can lead to very different decision-related behaviours, such as judging risk (Lerner and Keltner, 2000; Raghunathan and Pham, 1999) product valuation (Lerner, Small and Loewenstein, 2004), and use of heuristics (Tiedens and Linton, 2001). Table 3 summarizes some relevant studies. For example, anger and fear will lead to more optimistic and pessimistic judgments respectively (Lerner and Keltner, 2000). Extending this finding, Tiedens and Linton (2001) demonstrate that emotions associated with certainty appraisals

---

<sup>12</sup> In the mood literature, Isen & Means (1983) found that positive mood led to attempts to reduce decision complexity through the application of simplifying decision heuristics. Lewinsohn and Mano (1993), however, found that pleasant moods tended to lead to more time-consuming and complex decision strategies. Mano (1990) used level of arousal to try to explain these contradictory findings. He found that level of arousal was just as important as valence in influencing decision processes. Mildly positive moods led to less time spent and information searched; however, as positive mood increased, people spent more time deliberating and used more decision-related information. This was in direct contrast to the proposal that arousal hinders attention and thus reduces processing capacity devoted to the decision (Kahneman, 1973).



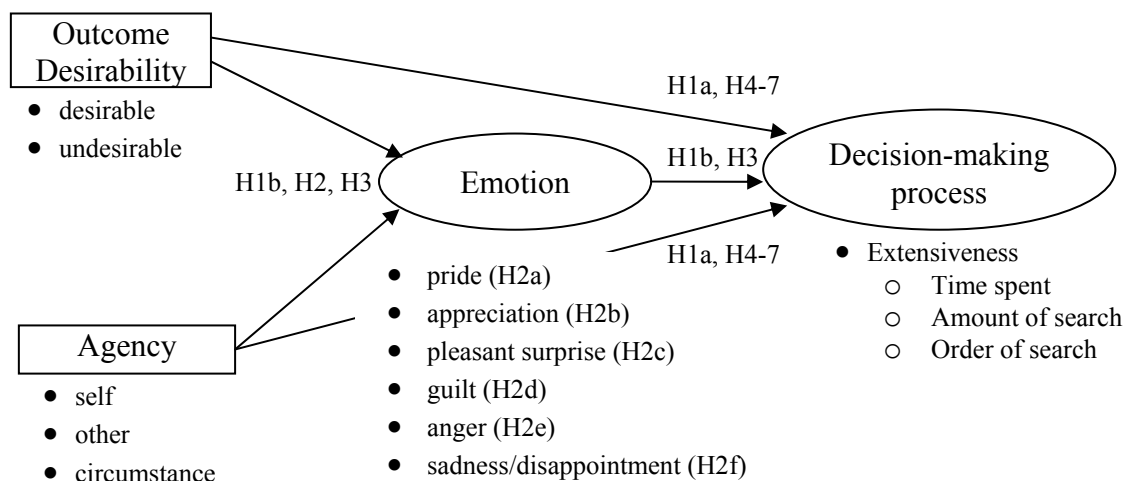
(e.g. anger) result in greater reliance on source expertise and less on argument quality than emotions grounded in uncertainty (e.g. fear). Finally, Lerner, Small and Loewenstein (2004) demonstrate that differing emotions can lead to contrary decisions in consumption-related decisions with real money at stake by showing that sadness reverses people's selling and choice prices for a product relative to a neutral condition. This evidence combines to support the newly accepted argument that the dimensions of valence and arousal are inadequate for explaining how emotions impact consumer decision-making processes. However, these studies do not combine to present a clear picture of how decision-making processes are actually impacted. I believe that the missing link lies with Ruth, Brunel and Otnes's (2002) discovery that agency appraisal holds the key to explaining emotions once outcome desirability has been accounted for. The opportunity to add explanatory value to current theory lies with the expanding literature exploring differences in behaviours arising from a variety of emotions, and more specifically, the role that their underlying differences play in influencing decision-making processes, both directly and indirectly as depicted in Figure 1 in the Introduction.

**Table 3: A Summary of Findings from Relevant Emotions Studies**

| Article                                 | Appraisal or Emotion Manipulations   | Dependent Variables  | Context   | Attributed Cause of Emotion                                       | Finding  |
|---|--|--|---|---|--|
| Luce, Bettman & Payne (1997)            | negative emotion   | choice process   | choose a child to aid   | circumstance (child poverty)                                      | Processing becomes more extensive and attribute based as negativity increases  |
| Luce (1998)                             | product attributes (trade-off difficulty); response options  | choice, retrospective negative emotion   | automobile purchase   | unclear (not provided)  | Increased negative emotion increases avoidant responses, avoidant responses lower retrospective negative emotion   |
| Raghunathan & Pham (1999)               | anxiety, sadness, neutral  | risk preferences, outcome impact (self/other)  | monetary gamble & job choice                                    | circumstance (illness)  | Different risk preferences in self-impact decisions only, sad individuals preferred high risk/ reward options, while anxious people favoured low risk/reward options   |
| Desteno, Petty, Wegener & Rucker (2000) | anger, sadness; need for cognition   | likelihood estimates, episodic memory recall   | risk questions similar to Johnson & Tversky (1983), news pieces | other (e.g. car dealer), circumstance (e.g. illness)              | Feelings of sadness and anger differentially bias likelihood estimates of similarly emoting events. Cognition overrides affect when emotion is salient and desire for accuracy is high.  |
| Lerner & Keltner (2000)                 | fear, anger  | Risk assessments (optimistic/ pessimistic)   | Johnson & Tversky's (1983) risk questionnaire                   | circumstance (illness, natural disaster), unclear (car accidents) | Fearful people made pessimistic judgements while angry people made optimistic judgements   |
| Pham, Cohen, Pracejus & Hughes. (2001)  | pleasantness   | emotions, positive/ negative assessment  | responses to pictures & TV commercials                          | unclear (not provided)  | Feelings generated faster & elicit more agreement than assessments, feelings were better predicted spontaneous thoughts than were cold assessments   |
| Tiedens & Linton (2001)                 | valence & certainty: (angry, happy, neutral, hope, worry, disgust, content, sadness, fear); message source factors | proxies indicative of heuristic vs. systematic processing (source effects on decision) | news article persuasiveness, response to movie clips            | unclear (various self-selected); circumstance (movie clips)       | Certainty emotions lead to more reliance on expert sources and more stereotyping of identifiable sources than do uncertain emotions. No differences are found in the case of novice or unidentifiable sources with uncertain emotions. |
| Lerner, Small & Loewenstein (2004)      | disgust, neutral, sad; selling or choice task  | set selling or choice price  | value a highlighter   | Movie clips: unclear, circumstance (illness)                      | Sadness makes choice prices exceed selling prices (reverses the endowment effect)  |
| Raghunathan & Corfman (2004)            | happy, anxious, sad, neutral; message valence, task relevance  | preferred task order, argument recall  | Task order(dinner/ plumber) preference, caffeine essay          | circumstance (illness), unclear (various self-selected)           | Sad people prefer enjoyable task first & anxious people prefer unenjoyable first, mood repair makes sad people recall more positive arguments when task is relevant  |
| Rucker & Petty (2004)                   | Angry, sad, neutral (magazine articles)  | choice   | Select a vacation spot (active/passive)                         | Other (anger), circumstance (sad),                                | Angry respondents chose the more active vacation spot while sad respondents preferred the more passive one   |
| Yi & Baumgartner (2004)                 | anger, regret, worry disappointment,   | coping strategies  | post-purchase coping response to negative outcome               | unclear (various self-selected)                                   | Anger led to confrontive coping, regret led to acceptance, high control worry led to planful problem solving, disappointment (circumstance-related) & low control worry led to mental disengagement                                    |

### Chapter 3: Hypotheses

Two factors, outcome desirability and agency, are proposed to be the key determinants of emotions, which in turn determine what consumer decision-making process will be used in emotion-laden contexts. Outcome desirability and agency are expected to interact to affect the extensiveness of consumer decision-making processes both indirectly through mediating effects of emotional responses and directly through cognitive appraisal (see Figure 4 to revisit the proposed model with hypothesis labels). In this case, decision-making processes refer to the amount of product information searched, the time spent deliberating, and whether product information is searched by brand or by attribute (Isen and Means, 1983; Lewinsohn and Mano, 1993; Mano, 1990; Payne, Bettman and Johnson, 1993). Table 4 provides an overview of the proposed relationships between outcome desirability, agency, emotions, and the



**Figure 4: Proposed Model with Hypotheses Labelled**

**Table 4: Proposed Relationships Between Outcome Desirability and Agency of Appraised Situations, Leading to Emotions and the Extensiveness of Decision-Making Processes During Purchase**

|                             |                    | <u>Agency</u>                  |                                       |  |
|-----------------------------|--------------------|--------------------------------|---------------------------------------|--|
|                             |                    | <i>Self</i>                    | <i>Other</i>                          | <i>Circumstance</i>                                    |
| <u>Outcome Desirability</u> | <i>Desirable</i>   | <u>Pride</u><br>More Extensive | <u>Appreciation</u><br>Less Extensive | <u>Pleasant Surprise/ Delight</u><br>Less Extensive    |
|                             | <i>Undesirable</i> | <u>Guilt</u><br>Less Extensive | <u>Anger</u><br>More Extensive        | <u>Sadness/ Disappointment</u><br>Moderately Extensive |

extensiveness of decision-making processes in purchase contexts. The following sections will discuss these anticipated relationships in more depth and state formal hypotheses regarding their interactions. Agency due to circumstance receives less attention because few studies consider it and its effects. As a result, all elements of this study relating to circumstance should be viewed as exploratory in nature, with hypotheses relating to circumstance being put forth guardedly. A summary list of hypotheses may be found in Table 5 at the end of the chapter.

### **Direct and Indirect Effects of Outcome Desirability and Agency Appraisals on Consumer Decision-making**

An overarching hypothesis in this study is that appraisals will influence behaviour both directly through cognitive effects and indirectly through mediating emotional effects. By considering both the cognitive and affective effects of appraisals on consumer decision-making, this research seeks to establish the relative influences of cognition and emotion in emotion-laden consumer decision-making contexts.

#### ***Direct Effects***

It is anticipated that the combined relationships between the appraisals of agency and outcome desirability will have a direct effect on the extensiveness of the consumer decision-making process. Emotion-focused research to date has concentrated on the influence of affect on decision-making while largely ignoring cognition; yet, we must not abandon the role of cognition in consumer decision-making processes (Payne, Bettman and Johnson, 1993). For example, when one is the object of a desirable other-caused outcome such as receiving a gift, one may not feel particularly appreciative, but may still be cognitively motivated to reciprocate the behaviour. Several authors have evidenced the combined effects of affect (i.e. positive/negative feelings) and cognition in consumer decision-making (Garbarino and Edell, 1997; Shiv and Fedorikhin, 1999). For example, if you have broken something that belonged to someone else, you may feel guilty; however guilt alone will not prompt you to purchase a

replacement. Cognitive awareness of personal responsibility will also play a role. Similarly, Folkes, Koletsky and Graham (1987) demonstrated empirically that the other-caused agency associated with service failures influenced repurchase decisions both through the mediating effect of anger and directly through cognition. Thus, while emotion is expected to mediate the effects that outcome desirability and agency have on consumer decision-making, cognition may also play a significant role in determining decision-making extensiveness.

*H1a: Outcome desirability and agency will influence consumer decision-making processes directly.*

### ***Indirect Effects***

It is anticipated that the combined effect of the appraisals of agency and outcome desirability on the extensiveness of the consumer decision-making process will be mediated by the emotional responses evoked by the appraised situations. It has been established that cognitive appraisals combine to evoke different emotions (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985). It is also clear from previous research findings that emotions impact consumer decision-making (Pham, 1998; Pham et al., 2001). Appraisal theory has been used to demonstrate how appraisals that are central to elicited emotions influence subsequent consumer behaviour through the mediating effects of those emotions (Nyer, 1997). For example the levels of certainty associated with fear (uncertain) and anger (certain) have been shown to differentially impact subsequent risk assessments (Lerner and Keltner, 2000) and persuasion effects (Tiedens and Linton, 2001). Further, emotions associated with different agency appraisals have been shown to lead to different coping behaviours (Yi and Baumgartner, 2004) and subsequent attribution judgments (Keltner, Ellsworth and Edwards, 1993). In a consumer context, shoppers with economic orientations take pride in finding bargains. This emotion may directly effect how much time and effort they expend during the decision-making process. As such, it is anticipated that the appraisals under study will affect consumer decision-making indirectly through the emotional responses that they evoke.

*H1b: The influences of outcome desirability and agency on consumer decision-making processes will be mediated by emotions.*

### **The Effects of Outcome Desirability and Agency Appraisals on Emotions**

Most studies that have examined the combined influences of appraisals on emotions have studied one specific emotion at a time and asked questions about their related appraisals (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985). Few studies have asked participants to report on a variety of emotions within a single appraisal context in their methodologies (Scherer and Ceschi, 1997). Roseman (1991) developed a variety of scenarios manipulating five appraisal conditions and asked respondents to report which of a variety of emotions would be felt in each given situation, but in contrast to Ruth, Brunel and Otnes' (2002) strong empirical support, he found only weak support for the influence of agency on emotions and called for further study into the effects of the appraisal. This study will re-examine whether the anticipated emotions resulting from different outcome desirability and agency appraisal combinations dominate over those anticipated from other combinations.

### ***Dominant Emotions Stemming from Desirable Appraisals***

Self-caused desirable events elicit feelings of pride or gratification (Ortony, Clore and Collins, 1988; Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985). These sorts of desirable events generally involve achievement, or fulfilling some personal goal or expectation (Lewis, 1993). However, Hareli and Weiner (2000) have shown that people who attribute their success to internal, stable qualities such as natural ability are perceived as more arrogant and are less liked, while those who attribute their success to more unstable or external factors such as extra effort or luck are perceived as modest and are more liked. As such, people tend to de-emphasize personal responsibility and feelings of pride and intensify reports of joy and surprise when communicating their feelings regarding achievement situations (Zammuner, 1996). Therefore, it is recognized that reported appraisals of self-

causation and feelings of pride may be downplayed and reports of pleasant surprise may be increased, potentially reducing effect sizes.

*H2a: Desirable self-caused events will lead to greater experienced feelings of pride than of appreciation, pleasant surprise, guilt, anger, disappointment or sadness.*

Other-caused desirable events generate emotions of appreciation or gratitude (Ortony, Clore and Collins, 1988; Ruth, Brunel and Otnes, 2002). Gratitude occurs most strongly when one is the recipient of a valuable benefit that is costly to the giver (McCullough, Tsang and Emmons, 2004). However, there is generally little research on this emotion (Hareli and Weiner, 2002) and what distinguishes between giving situations that lead to feelings of gratitude as opposed to indebtedness, guilt or embarrassment. However, attribution theorists would likely attribute the difference to the intention of the giver, with gratitude deriving from perceptions of altruistic giving or lack of reciprocal expectation.

*H2b: Desirable other-caused events will lead to greater experienced feelings of appreciation than of pride, pleasant surprise, guilt, anger, disappointment or sadness.*

Surprise may be either desirable (pleasant surprise) or undesirable (shock) (Ortony, Clore and Collins, 1988). Studies of negative emotions outweigh those considering desirable ones (Taylor, 1991); however, because people tend to recall more desirable information than undesirable (Isen, 1993) they tend to recall pleasant surprises over shocks (Smith and Ellsworth, 1985). Desirable events for which no one is responsible will elicit emotions resembling pleasant surprise (Ortony, Clore and Collins, 1988) or delight (Oliver, Rust and Varki, 1997).

*H2c: Desirable circumstance-caused events will lead to greater experienced feelings of pleasant surprise than of pride, appreciation, guilt, anger, disappointment or sadness.*

### ***Dominant Emotions Stemming from Undesirable Appraisals***

Self-caused undesirable events elicit guilt (Ortony, Clore and Collins, 1988; Ruth, Brunel and Otnes, 2002). Guilt is said to occur as a result of failing to achieve a personal standard (Hareli and Weiner, 2002) or from interpersonal transgression (Baumeister, Stillwell and Heatherton, 1994). However, it has been suggested that guilt is strongest and more common in the context of close relationships (Baumeister, Stillwell and Heatherton, 1994) rather than in social isolation.

*H2d: Undesirable self-caused events will lead to greater experienced feelings of guilt than of pride, appreciation, pleasant surprise, anger, disappointment or sadness.*

People who have experienced an undesirable event that someone else has caused feel angry (Ortony, Clore and Collins, 1988). Anger is increased with the degree of the agent's blame and severity of harm, with degree of blame being associated with controllability or intention (Weber, 2004). Unlike guilt, there does not appear to be a particular relationship context in which anger is heightened.

*H2e: Undesirable other-caused events will lead to greater experienced feelings of anger than of pride, appreciation, pleasant surprise, guilt, disappointment or sadness.*

Undesirable events for which no one is responsible elicit emotions resembling sadness (Ortony, Clore and Collins, 1988) and disappointment (Smith and Ellsworth, 1985; Yi and Baumgartner, 2004). Sadness is a circumstance-related emotion (Smith and Ellsworth, 1985). Disappointment, on the other hand, is ambiguous with respect to agency appraisals. This



emotion may be caused by, or directed at, either outcomes (circumstances) or people (oneself and others) (Smith and Ellsworth, 1985; Yi and Baumgartner, 2004). Thus, it may be elicited by any of the undesirable appraisal conditions. While these circumstance-related emotions should appear more strongly than other emotions within the circumstance conditions, there is also a tendency to try to assign personal blame for disappointing outcomes (Yi and Baumgartner, 2004) and assign human characteristics to events or circumstances beyond human control (Lewis, 1993; Ortony, Clore and Collins, 1988), meaning that other agent-caused negative emotions could also be felt. Similarly, these emotions may be elicited by other undesirable conditions. In recognition of these confounding factors, H2f is proposed tentatively.

*H2f: Undesirable circumstance-caused events will lead to greater experienced feelings of disappointment or sadness than of pride, appreciation, pleasant surprise, guilt or anger.*

### ***A Word on Mixed Emotions***

It has been posited in the literature and is intuitively reasonable that feeling more than one emotion in response to a particular event can be quite common (Ruth, Brunel and Otnes, 2002; Scherer and Cecchi, 1997; Sullivan and Strongman, 2003). In mixed emotional experiences, one or more of the underlying appraisals of a situation are ambiguous, making felt emotions unclear (Ruth, Brunel and Otnes, 2002): in most cases, a dominant emotion occurs along with other less prominent feelings. A wide range of methods have been used to capture this effect. Most studies ask participants to recall a past event in which they felt one specific emotion (Smith and Ellsworth, 1985), with only some of these checking for other coinciding emotions (Ruth, Brunel and Otnes, 2002). Other studies, however, ask respondents about a collection of emotional responses to a particular scenario or event (Scherer and Cecchi, 1997). In these circumstances, the Peak-End Rule suggests that the strongest emotion and/or the last emotion felt during the incident will be the best remembered

(Redelmeier and Kahneman, 1989). Griffin, Drolet and Aaker's (2003) finding that memories of mixed emotions tend to turn into memories of pure emotions and become more polarized over time support this claim. While this study will measure multiple emotions, it is anticipated that one emotion will tend to dominate in response to stimulus events, particularly where memory is significant to the methodology. Therefore, the existence of mixed emotions should not obscure relationships between outcome desirability and agency, their associated emotions, and consumer decision-making processes.

### **The Effects of Emotions on Consumer Decision-making Processes**

The study of consumer affect has a rich history and it is well established that positive and negative affect influence consumer behaviour (Cohen and Areni, 1991). The study of emotions elicited by consumption situations has also been widely examined (Richins, 1997). This study examines how various specific incidental and integral emotions influence subsequent consumer-decision making processes.

### ***Desirable Emotions and Consumer Decision-making Processes***

There is empirical evidence that proud people have low expectations about future anticipated effort (Smith and Ellsworth, 1985). For example, a student who is proud of her success on a test as a result of intense study may report that she does not anticipate having to continue to study intensely. An explanation is that future tasks are not considered when appraising a past stimulus event. In other words, the student does not consider future tests or exams when appraising anticipated effort with respect to an already completed test. However, because achievement is one of the two main drivers of motivation (Weiner, 1986) and people seek to maintain positively valenced affective states (Isen, 1993), it is reasonable to assume that pride in achieving past success will breed attempts to maintain success in the future. A proud subject will feel responsible not only for the past success, but for future successes as well. Therefore, it is proposed that they will be motivated to continue to maximize personal benefits, prompting more extensive future decision-making processes. For example, if a

student performed well on a test through intense study, she would be highly motivated to continue to excel by continuing with a high level of study for subsequent tests. In a consumer decision-making context, if an investor believes that she is personally responsible for the success of a particularly lucrative stock pick, she will take more time and consider more information (process more extensively) in choosing her next one than if she believes her success resulted from a broker's advice or random market fluctuations.

*H3a: Increased experienced feelings of pride will lead to more extensive consumer decision-making processes.*

As has been mentioned, gratitude and appreciation are not well researched, so little is known about their influences on subsequent behaviour. Appreciation, or gratitude, is other-caused and has been empirically linked to moderately low anticipated effort (Ruth, Brunel and Otnes, 2002). Therefore, it is proposed that appreciation will not make people feel responsible for maintaining their desirable state, and will thus lead to less extensive consumer decision-making processes.

*H3b: Increased experienced feelings of appreciation will lead to less extensive consumer decision-making processes.*

While decision-making responses under desirable circumstance-caused conditions have not been overtly considered to the author's knowledge, evidence from the positive emotions literature suggests the logic and outcomes surrounding circumstance-caused events will mimic those of other-caused events because people spend less time attempting to differentiate (Ruth, Brunel and Otnes, 2002) or explain the reasons for (Taylor, 1991) positive emotions than negative ones. People also tend to attempt to attribute blame to circumstance as if it were a person with human characteristics (Ortony, Clore and Collins, 1988; Yi and Baumgartner, 2004). Accordingly, a pleasantly surprised person (e.g. a winning card player with a luck charm) will feel similarly responsible for their situation to an appreciative person

(e.g. a winning card player with a favourite dealer) and respond with a similarly less extensive consumer decision-making process.

*H3c: Increased experienced feelings of pleasant surprise will lead to less extensive consumer decision-making processes.*

### ***Undesirable Emotions and Consumer Decision-making Processes***

While Lazarus and Folkman (1987) argue that self-blame may lead to increased motivation to perform well, Lazarus (1983) suggests that people attempt to minimize undesirable emotions such as shame through avoidance. Thus, both problem solving and avoidance strategies have been proposed, leading to extensive (significant time and amount of information searched) and selective (little time and amount of information searched) decision-making strategies respectively (Lazarus and Folkman, 1984; Luce, Bettman and Payne, 1997). In line with agency appraisals and justice theories, if someone is responsible for causing harm to someone else, they will feel motivated to make reparations (Ellsworth and Smith, 1988); however, if they have harmed themselves, they will accept their current loss as reparation. In most consumer decision-making contexts, losses are personal. In a purchase context, regretting a personal product choice has been shown to evoke acceptance of an outcome as a learning experience instead of evoking attempts to manage the problem (Yi and Baumgartner, 2004). Therefore, a guilty consumer will feel responsible for a personal loss and accept it, leading to less extensive consumer decision-making processes.

*H3d: Increased experienced feelings of guilt will lead to less extensive consumer decision-making processes.*

Anger is related to situations that are appraised to be highly unfair (Ruth, Brunel and Otnes, 2002), thus motivating action to change one's current circumstances (Lewis, 1993). For example, anger over product and service defects (blamed on the manufacturer or service provider) leads to complaining behaviour and seeking reparation (Folkes, Koletsky and Graham, 1987; Yi and Baumgartner, 2004). Accordingly, when a situation is deemed to be

changeable, decision-making will be both active and calculated (Lazarus and Folkman, 1984), leading to more extensive processing. However, once again an opposing argument may be made. Anger has been shown to lead to more credence of expert sources (Tiedens and Linton, 2001), which may be interpreted either as an evaluation of a relevant piece of information (indicative of extensive processing) or as a heuristic (indicative of less extensive processing). There is also evidence that angry people attempt to forget about the situation and/or resign themselves to defeat (Yi and Baumgartner, 2004) which would imply less extensive decision-making processes; however, this is proposed to occur only after all possible avenues for justice have been pursued and/or the person believes that they will be unable to gain satisfactory reparation (Weber, 2004; Yi and Baumgartner, 2004). Therefore, angry people will feel responsible for actively gaining satisfactory reparations until they are either achieved or deemed impossible, thus leading to extensive consumer decision-making processes.

*H3e: Increased experienced feelings of anger will lead to more extensive consumer decision-making processes.*

When disappointment is outcome-related, it relates to a circumstance that is deemed unchangeable, leading to avoidance mechanisms and correspondingly less extensive decision-making (Yi and Baumgartner, 2004). However, there is also a tendency to try to blame disappointing outcomes on *someone* (Yi and Baumgartner, 2004) and treat circumstance with a level of humanity (Lewis, 1993; Ortony, Clore and Collins, 1988). In this way, circumstance-caused disappointment can be more like person-related disappointment, much more commonly directed at someone else than oneself. Therefore, disappointment may sometimes lead to confrontive coping strategies similar to those relating to anger, prompting extensive consumer decision-making processes. Because disappointment can be either outcome-related or person-related, leading to less and more extensive consumer decision-making processes respectively, evidence of its effects should lie in between the two extremes, at a moderate level of decision-making extensiveness.

Sadness is said to elicit preferences for passive activity (Rucker and Petty, 2004) and to cause internal messages to slow down (Izard, 1993). However, several studies manipulating sadness (involving circumstance-caused emotion evoked by scenarios about illness) do exist (Raghunathan and Corfman, 2004; Rucker and Petty, 2004; Tiedens and Linton, 2001). Like anger, it may elicit different responses depending on whether the situation is believed to be changeable or not. Tiedens and Linton (2001) asked subjects to recall a time when they were sad in an uncertain (changeable) situation or in a certain (unchangeable) one. When the situation was believed to be changeable, strong arguments were more heavily weighted than when a situation was believed to be unchangeable, but only when task relevance was high. Otherwise, the behavioural effects of sadness conditions resembled the neutral condition. This adds support to the proposition that circumstance-caused undesirable events lead to moderately extensive consumer decision-making processes.

*H3f: Increased experienced feelings of disappointment or sadness will lead to moderately extensive consumer decision-making processes.*

Because H3f may be confounded by people's efforts to attribute blame to circumstance as if it were a person, decision-making processes could closely resemble those predicted to occur in other-caused situations (Ortony, Clore and Collins, 1988; Yi and Baumgartner, 2004).

### **The Effects of Outcome Desirability and Agency Appraisals on Consumer Decision-making Extensiveness**

Previous hypotheses have proposed what emotions are elicited by different combinations of desirability and agency appraisals (H2) and what impacts those emotions have on consumer decision-making extensiveness (H3). The following hypotheses propose comparisons of how different desirability/agency combinations impact consumer decision-making extensiveness. These hypotheses are distinct from H2 and H3 in that they deal with both the direct and indirect effects of appraisals on consumer decision-making extensiveness.

### ***Desirable Versus Undesirable Events***

Previously, it was posited that desirable self-caused circumstances lead to pride and that pride leads to increased consumer decision-making extensiveness. It was also argued that undesirable self-caused situations lead to guilt and that guilt leads to decreased consumer decision-making extensiveness. Self-caused desirable situations should therefore lead to more extensive consumer decision-making than self-caused undesirable situations.

*H4a: Desirable self-caused events will lead to more extensive consumer decision-making processes than will undesirable self-caused events.*

If someone believes that someone else has provided them with a desirable outcome, it leads to appreciation or gratitude. Appreciation is said to lead to decreased consumer decision-making extensiveness. Alternatively, anger is generated when someone else causes a personally undesirable situation. Anger, in turn, has been argued to lead to increased extensiveness in consumer decision-making processes. Therefore, it is expected that consumers who blame someone else for their desirable situations will use less extensive decision-making processes than those who believe that others are responsible for their undesirable situations.

*H4b: Desirable other-caused events will lead to less extensive consumer decision-making processes than will undesirable other-caused events.*

It has been posited that desirable circumstance-caused situations cause pleasant surprise, which then leads to decreased decision-making extensiveness. Undesirable circumstance-caused situations, on the other hand, have been argued to lead to sadness or disappointment, which have been argued to generate moderately extensive consumer decision-making processes. Together, these propositions imply that desirable circumstance-caused events will lead to less extensive consumer decision-making processes than undesirable circumstance-caused events.

*H4c: Desirable circumstance-caused events will lead to less extensive consumer decision-making processes than undesirable circumstance-caused events.*

### ***Self- Versus Other-Caused Events***

Positive emotions are not as clearly differentiated as are negative emotions (Ruth, Brunel and Otnes, 2002). Some theorists have argued that people seek to maintain positive mood by spending little time evaluating potentially mood altering information (Isen, 1993; Taylor, 1991). This has led to a generalization in the literature that positive affect tends to lead to more heuristic processing (Schwarz, 1990). However, Mano's (1990) evidence that increased positive affect (i.e. higher arousal) leads to longer deliberation time and more message scrutiny (neither of which is characteristic of heuristic processing) contradicts this generalization. While it may be argued that his findings reflect a relatively low perceived likelihood of encountering mood altering information or need to avoid potentially mood altering information (Wegener, Petty and Smith, 1995), there may be another explanation.

This research proposes that different levels of extensiveness in purchase decisions resulting from desirable events may be explained by agency appraisals related to those events. If someone believes that they are the cause of their own desirable outcome, they will also believe that they are responsible for maintaining it. Thus, they will engage in more extensive decision-making (in a purchasing context this would suggest that they would take more time and consider more information) than if they believe that someone else is the cause of their desirable outcome.

*H5a: Desirable self-caused events will lead to more extensive consumer decision-making processes than will desirable other-caused events.*

When people are feeling undesirable emotions, it is often argued that they will engage in more systematic processing of information (Schwarz, 1990). This is consistent with arguments that people will attempt to change undesirable situations by problem solving,



thereby reducing or eliminating undesirable emotions such as anger (Lazarus, 1991; Yi and Baumgartner, 2004). However, not all negative emotions are created equal. People use avoidant coping strategies to deal with undesirable situations that are deemed to be unchangeable, such as past events (Lazarus, 1991; Yi and Baumgartner, 2004). It is proposed that self-cause undesirable events are perceived as past harms and the associated response will be avoidance. When someone believes that they are responsible for their own undesirable situation, they are more likely to believe that they deserve to suffer a punitive loss (Darley and Pittman, 2003). They will also be more likely to want to avoid responsibility for further loss and use more avoidant strategies to deal with the situation than if they did not feel responsible for the situation. Therefore, they will spend less time and consider less information when making subsequent consumption decisions than if they did not consider themselves responsible for their undesirable state.

*H5b: Undesirable self-caused events will lead to less extensive consumer decision-making processes than will undesirable other-caused events.*

#### ***Other- Versus Circumstance-Caused Events***

Some theorists argue that people assign human characteristics to circumstance, so that circumstance-caused events are interpreted similarly to other-caused events (Ortony, Clore and Collins, 1988). It may be argued that the person will be satisfied that something other than themselves has improved their situation (Taylor, 1991), feel no responsibility for maintaining it, and thus make subsequent decisions with little time and effort. However, it may also be asserted that the person will then take on responsibility for maintaining their desirable situation through extensive decision-making strategies (Lazarus and Folkman, 1987). However, as was the case with other-related decision-making processes, it is proposed that the motivation to act is lacking in this scenario. When someone believes that something other than themselves is responsible for their desirable state, they will not feel any need to take responsibility for maintaining it, nor will they want to risk doing anything to alter it. For

example, one can imagine a poker player who thinks his winning streak is resulting from his favourite dealer or the good luck charm in his pocket. He would spend less time and attend to less information in subsequent hands (i.e. decision-making tasks) than if he did not believe the dealer or charm to be the cause of his good fortune.

*H6a: Desirable other- and circumstance-caused events will lead to similarly extensive consumer decision-making processes.*

In other words, no significant difference is expected between these two conditions.

When people believe that their undesirable situations are someone else's fault, they are more likely to act to rectify their situation than those who do not blame someone else for their predicament (Folkes, 1988). This is consistent with seeking retribution for harm (Darley and Pittman, 2003). There is evidence that people do not feel as aggrieved in situations of accidental or natural cause as they do in active or personal wrongdoing (Baron, 1993). It has been evidenced that people who have been wronged unintentionally (by accident) will merely want to be compensated for the loss, without seeking further punitive damages (Darley and Pittman, 2003). Therefore, it is proposed that circumstantially caused undesirable events do not drive active needs for retribution or confrontive behaviour that may motivate more extensive consumer decision-making processes. However, as evidenced by the desire to be fairly compensated, they also do not elicit the less extensive decision-making processes associated with avoidance. Accordingly, it is proposed that circumstantially caused undesirable events will result in moderately extensive consumer decision-making processes. This hypothesis coincides with the findings of existing studies that use circumstantially-based stimuli to study coping and consumer decision-making processes (Luce, Bettman and Payne, 1997).

*H6b: Undesirable other-caused events will lead to more extensive consumer decision-making processes than will undesirable circumstance-caused events.*

### ***Self- Versus Circumstance-Caused Events***

Because other- and circumstance-caused events are expected to cause similar consumer decision-making extensiveness, the relative decision-making extensiveness between circumstance- and self-caused events should mimic that seen in other- and self-caused situations (H2a).

*H7a: Desirable self-caused events will lead to more extensive consumer decision-making processes than will desirable circumstance-caused events.*

It was previously argued that people will spend less time and consider less information when making subsequent consumer decisions if they did not consider themselves responsible for their undesirable state. While these people may believe that they deserve a loss of some sort, people in circumstance-caused situations will not. While they will not seek punitive reparation, they will be motivated enough to be sure that they do not lose anything (Darley and Pittman, 2004). It is anticipated that circumstance-caused events will lead to less extensive consumer decision-making than other-caused events; however, it is also believed that it will be more extensive than in situations that are perceived to be self-caused.

*H7b: Undesirable self-caused events will lead to less extensive consumer decision-making processes than will undesirable circumstance-caused events.*

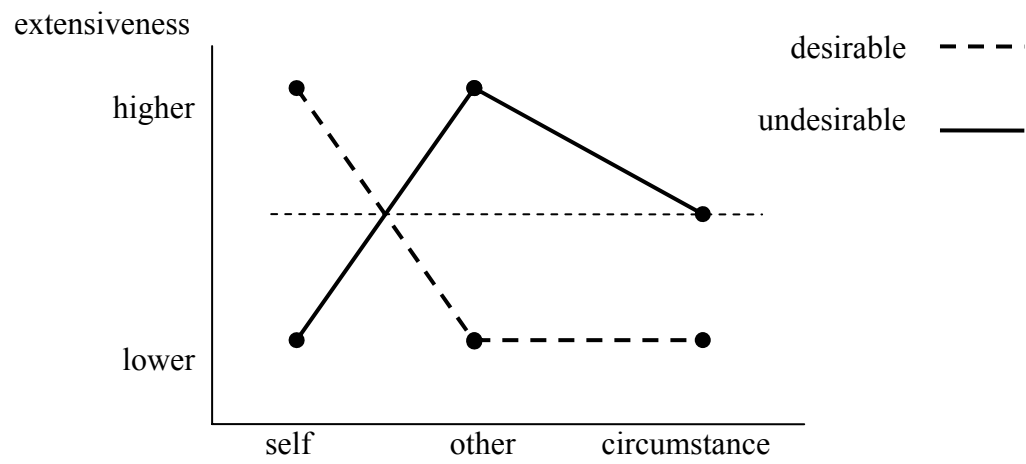
The effects in hypotheses H6 and H7 are expected to be small compared to those evidenced in self-other hypotheses because the level of decision-making effort in response to undesirable circumstance-caused events will lie between those of other conditions.

### **Anticipated Comparative Consumer Decision-making Extensiveness Effects**

The majority of studies to date have compared groups' behaviours during various specific emotional states relative to one another rather than to a neutral condition (for exceptions see Lerner, Small and Loewenstein, 2004; Rucker and Petty, 2004). Further, knowledge to date has tended to measure relative group differences and most authors have studied emotions of

similar outcome desirability; therefore, there is little evidence of how behaviour under specific desirable and undesirable emotional states compare with each other or to a neutral condition. The studies that have used a control group usually involve emotions grounded in undesirable outcome desirability appraisals, such as fear, anger, anxiety and sadness. These studies have demonstrated opposing effects on their chosen dependent variables (e.g. preference) around the neutral condition (Raghunathan and Corfman, 2004; Rucker and Petty, 2004). Raghunathan and Corfman (2004) measure happiness along with anxiety and sadness, with happiness deriving similar behaviour to the neutral condition. This is consistent with the accepted argument that happiness is seen as a global emotional state that people report in the absence of other felt emotions (Averill and More, 1993). Tiedens and Linton (2001) manipulate both desirable and undesirable emotional states (i.e. anger, contentment, worry and surprise) but do not consider outcome desirability effects in their analyses, instead they focus solely on certainty (the appraisal of interest). Thus little evidence of the differential impacts of other appraisals within desirable emotional states is available beyond the effects of arousal found in the dimensions literature.

Given that happiness is treated similarly to a neutral condition (Averill and More, 1993) and behavioural effects occur around a neutral condition in response to undesirable emotions (Rucker and Petty, 2004), I anticipate similar movement away from a central position in response to desirable emotional states and across combined appraisal conditions. Visually, the anticipated relative responses are depicted in Figure 5. While neither formally proposed nor tested in this study, it is possible that the dotted line may represent a neutral condition without any emotional inducement, evoking a moderate baseline level of consumer decision-making extensiveness similar to that of the undesirable circumstance-caused condition.



**Figure 5: Anticipated Relationships Between Hypothesized Appraisal Effects and Decision-making Extensiveness**

**Table 5: Summary Table of Decision-making Hypotheses**

| <b>Overall Effects</b>                          |                     |             |  |
|---|---------------------|-------------|--|
| <i>Direct</i>                                   | <i>appraisals</i>   | <b>H1a</b>  | Outcome desirability and agency will influence consumer decision-making processes directly.  |
| <i>Indirect (mediation)</i>                     | <i>emotions</i>     | <b>H1b</b>  | The influences of outcome desirability and agency on consumer decision-making processes will be mediated by emotions.  |
| <b>Effects of Appraisals on Emotions</b>        |                     |             |  |
| <i>Desirable</i>                                | <i>Self</i>         | <b>H2a</b>  | Desirable self-caused events will lead to greater experienced feelings of pride than feelings of appreciation, pleasant surprise, guilt, anger, disappointment or sadness.             |
|   | <i>Other</i>        | <b>H2b</b>  | Desirable other-caused events will lead to greater experienced feelings of appreciation than feelings of pride, pleasant surprise, guilt, anger, disappointment or sadness.            |
|   | <i>Circumstance</i> | <b>H2c</b>  | Desirable circumstance-caused events will lead to greater experienced feelings of pleasant surprise than feelings of pride, appreciation, guilt, anger, disappointment or sadness.     |
| <i>Undesirable</i>                              | <i>Self</i>         | <b>H2d</b>  | Undesirable self-caused events will lead to greater experienced feelings of guilt than feelings of pride, appreciation, pleasant surprise, anger, disappointment or sadness.           |
|   | <i>Other</i>        | <b>H2e</b>  | Undesirable other-caused events will lead to greater experienced feelings of anger than feelings of pride, appreciation, pleasant surprise, guilt, disappointment or sadness.          |
|   | <i>Circumstance</i> | <b>H2f</b>  | Undesirable circumstance-caused events will lead to greater experienced feelings of disappointment or sadness than feelings of pride, appreciation, pleasant surprise, guilt or anger. |
| <b>Effects of Emotions on Decision-making</b>   |                     |             |  |
| <i>Pride</i>                                    |                     | <b>H3a</b>  | Increased experienced feelings of pride will lead to more extensive consumer decision-making processes.  |
| <i>Appreciation/Gratitude</i>                   |                     | <b>H3b</b>  | Increased experienced feelings of appreciation will lead to less extensive consumer decision-making processes.   |
| <i>Pleasant Surprise/Delight</i>                |                     | <b>H3c</b>  | Increased experienced feelings of pleasant surprise will lead to less extensive consumer decision-making processes.  |
| <i>Guilt</i>                                    |                     | <b>H3d</b>  | Increased experienced feelings of guilt will lead to less extensive consumer decision-making processes.  |
| <i>Anger</i>                                    |                     | <b>H3ed</b> | Increased experienced feelings of anger will lead to more extensive consumer decision-making processes.  |
| <i>Disappointment (outcome-related)/Sadness</i> |                     | <b>H3f</b>  | Increased experienced feelings of disappointment or sadness will lead to moderately extensive consumer decision-making processes.  |
| <b>Effects of Appraisals on Decision-making</b> |                     |             |  |
| <i>Desirable/Undesirable</i>                    | <i>Self</i>         | <b>H4a</b>  | Desirable self-caused events will lead to more extensive consumer decision-making processes than will undesirable self-caused events.  |
|   | <i>Other</i>        | <b>H4b</b>  | Desirable other-caused events will lead to less extensive consumer decision-making processes than will undesirable other-caused events.  |
|   | <i>Circumstance</i> | <b>H4c</b>  | Desirable circumstance-caused events will lead to less extensive consumer decision-making processes than will undesirable circumstance-caused events.                                  |
| <i>Self/Other</i>                               | <i>Desirable</i>    | <b>H5a</b>  | Desirable self-caused events will lead to more extensive consumer decision-making processes than will desirable other-caused events.   |
|   | <i>Undesirable</i>  | <b>H5b</b>  | Undesirable self-caused events will lead to less extensive consumer decision-making processes than will undesirable other-caused events.   |
| <i>Other/Circumstance</i>                       | <i>Desirable</i>    | <b>H6a</b>  | Desirable other-caused and circumstance-caused events will lead to similarly extensive decision-making processes.  |
|   | <i>Undesirable</i>  | <b>H6b</b>  | Undesirable other-caused events will lead to more extensive consumer decision-making processes than will undesirable circumstance-caused events.                                       |
| <i>Self/Circumstance</i>                        | <i>Desirable</i>    | <b>H7a</b>  | Desirable self-caused events will lead to more extensive consumer decision-making processes than will desirable circumstance-caused events.  |
|   | <i>Undesirable</i>  | <b>H7b</b>  | Undesirable self-caused events will lead to less extensive consumer decision-making processes than will undesirable circumstance-caused events.  |

## **Chapter 4: Methodology**

The author uses objectivism and a positivist approach in designing the research. The overarching supposition of this manuscript is that different combinations of cognitive appraisals cause various emotions and subsequent response behaviours. However, the majority of previous studies measuring the impacts of appraisals on subsequent behaviours have used experimental designs to manipulate the emotions associated with the appraisals of interest rather than manipulating the appraisals themselves (Lerner and Keltner, 2000; Raghunathan and Pham, 1999; Tiedens and Linton, 2001; Yi and Baumgartner, 2004; see Roseman, 1991 for an exception). After carrying out an emotional manipulation, these studies then measure the appraisals that are said to elicit or cause the evoked emotions along with the dependent variable in question. For reasons of practicality, only a few studies have used field designs to capture both appraisals of, and emotional responses to, naturally occurring events (Folkes, Koletsky and Graham, 1987; Scherer and Cecchi, 1997).

This research was carried out in three studies. The research was originally supposed to involve only two studies, each of which was designed to address both research questions and all hypotheses. The first study was a vignette study that provided scenarios leading to a repurchase decision-making situation. It used an experimental design that manipulated cognitive appraisals and measures their impacts on emotions and decision-making processes. The second study involved a self-reported narrative regarding a past purchase situation. It was intended to enhance the external validity of the experiment carried out in study 1 and employed a quasi-experimental field design that asked participants to recall a situation that triggered purchase need recognition along with its related appraisals and emotions. While each of these designs has pros and cons, they both ensure that the link between appraisals and decision-making processes can be tested directly, without relying on, or artificially increasing, the mediating effect that emotion has on decision-making processes. Study 3 was added after the completion of the first two studies and is a replication of study 1. The controls in the

vignettes were relaxed in an attempt to increase the strength of emotional response to the vignettes and to enhance effect sizes on consumer decision-making processes.

Experimental design is the most appropriate method for measuring how cognitive appraisals affect emotions and subsequent consumer decision making processes because it allows the researcher to manipulate the appraisal of interest while holding all other aspects of the study constant; thus being able to attribute difference across conditions directly to the manipulated variable. Quasi experiments are less ideal for controlling variables, but do increase the external validity of findings.

Both vignette based experiments and critical incident narratives have been used previously in studies of the impacts of emotion on subsequent behaviour (Ruth, Brunel and Otnes, 2002; Tiedens and Linton, 2001). The first study used a two (desirable/undesirable event) by three (self-/other-/circumstance-agency) between-subjects factorial design. In the second study, participants were assigned to one of seven groups depending on their responses to a battery of questions. Six of these groups mimicked those in the first study, along with a seventh group of unclassifiable responses: a potential neutral condition. Outcome desirability was measured by how desirable or undesirable the outcome to a situation was reported to be. Similarly, agency was associated with the most highly appraised causal agent of a situation. The following sections will outline the research designs used in more detail.

### **Study 1**

The first study involved a general vignette experiment, as used by Luce, Payne and Bettman (1999) and Raghunathan and Pham (1999). In this method, respondents are given altered versions of similar vignettes, where insertion or removal of sentences is designed to manipulate the factors under study (Wason, Polonsky and Hyman, 2002). While this method carries a high level of experimental control, it may lead to lacking believability in some conditions, thus making manipulation strength problematic. Vignettes were standardized as



much as possible, while still attempting to create believable and realistic decision-making situations (Wason, Polonsky and Hyman, 2002).

Subjects were given a pre-tested scenario representing one of six possible product loss events (all involving a mobile phone), and were then asked to make a repurchase decision from a provided brand-attribute matrix. In scenario 1, the person breaks their old mobile phone and can replace it with a superior model using insurance money. In scenario 2, the person's old mobile phone is stolen and they can replace it with a superior model using insurance money. A freak power surge ruins the person's old mobile phone and they can replace it with a superior model using insurance money in scenario 3. Scenario 4 is similar to scenario 1 in that the person ruins their own mobile phone, but in this case the phone is brand new and they must replace it themselves. In scenario 5, the person's brand new mobile phone is stolen and they must replace it themselves. Finally, a freak power surge ruins the person's brand new mobile phone and they must replace it themselves in scenario 6. A sample vignette appears below; all six mobile phone repurchase scenarios may be found in Appendix 2. Using this approach, not only could appraisals be realistically manipulated, but a static product category made it possible to control the information set that subjects used to make decisions. Unanticipated forced repurchase (a forced replacement purchase after an unexpected product loss rather than product wear out), provided a convenient, realistic, and emotion-laden purchase situation in which to study the effects of interest.

*Vignette 5: "It's Friday afternoon and you've spent the last hour or so navigating your way through the crowds at the shopping mall. You decide to call a friend and see what they're doing this weekend. When you reach for your mobile you find it missing. You immediately think back to that jerk who ran into you earlier and disappeared into the crowd without even a backwards glance. You're sure that he ran into you on purpose and he stole your phone. You got your mobile phone about 3 months ago for \$799 with your service*

*plan. It has always been a really great phone. Because they no longer make your model of phone, you can't make use of your phone's replacement policy. However, you will receive a cheque for \$500 from your insurance company that can be used to pay replacement costs."*

### ***Sample Selection***

Approval for the involvement of human participants was granted by the Bond University Human Research Ethics Committee (BUHREC) under protocol number RO390. A student sample of 170 subjects was recruited from classes at Bond University. 117 of these students were recruited from marketing classes in return for course credit. The remainder were recruited through management classes and campus flyers in exchange for entry into a prize draw for a \$100 HMY gift certificate. To minimize non-response, recruitment flyers were provided containing the web site address of the data collection instrument, the response incentive, and the response deadline for collecting the incentive. Students had three weeks to respond to the survey, with two reminders being given after the initial recruitment effort. These efforts achieved an approximate response rate of 75%. The number of respondents in each of the six cells ranged from 25 to 30. There is no reason to believe that students differ from other members of the population with respect to the phenomena under consideration in this study, thus use of students as a test sample does not compromise external validity (Lynch, 1983).

Mobile phones were chosen to act as the product loss because of their pervasiveness within the sample, ensuring that the bulk of students would be able to relate to the provided scenarios. In line with this issue, respondents were asked to report first on their current mobile phone ownership, preferred mobile phone brand, product involvement and category expertise. A reduced set of five product involvement questions were taken from Zaichowsky's (1985) measure. The category expertise questions were drawn from Brucks's

(1985) subjective knowledge scale. See Appendix 3 for a sample of the data collection instrument.

### ***Data Collection***

Data were collected through a web-based interface (Appendix 3). Subjects were randomly assigned to one of the six scenarios, which were cycled based on order of login to the web site. They then responded to a set of questions related to their appraisals of the scenario to verify that appraisals (or perceptions of the scenarios) were as intended, as well as reporting their emotional responses to it (drawn mainly from the hypotheses).

The appraisals being measured included outcome desirability (favourable and desirable), self-caused agency (responsibility and controllability), other-caused agency (responsibility and controllability), circumstance-caused agency (responsibility and controllability), fairness (cheated or wronged, fair), and certainty (certain and understood). All appraisal scales were adapted from Smith and Ellsworth (1985) and Ruth, Brunel and Otnes (2002). Because Ruth, Brunel and Otnes (2002) based their scales on the Smith and Ellsworth (1985) scales, these scales have proven both reliable and valid in two previous studies. Other appraisal scales that were included for possible later exploratory research included pleasantness (pleasant and good), anticipated effort (effort and exert), and importance (important and relevant).

Multiple emotional terms were unnecessary for attaining valid results in previous studies because people are very good at distinguishing the subtleties of emotions (Smith and Ellsworth, 1985; Taylor, 1991). However, in order to attempt to demonstrate reliability in the emotion measures, multi-item scales were nonetheless developed. The set of two item scales were based on single item measures appearing in Smith and Ellsworth (1985) and Ruth, Brunel and Otnes (2002) and were intended to measure the six emotions under investigation. Measures included proud and pleased for pride, appreciative and grateful for appreciation, pleasantly surprised and delighted for pleasant surprise, regretful and guilty for guilt, annoyed and angry for anger, disappointed and frustrated for disappointment, and sad and miserable

for sadness. Two single-item measures of anxious and hopeful were included to measure the certainty-related emotions of hope and fear. While it is recognized that overtly measuring emotions and appraisals can lead to demand artefacts, there are few alternatives for tracking these processes (Johnson and Stewart, 2005). Emotional responses to the situation had to be measured quickly because manipulated emotions are known to dissipate rapidly (Taylor, 1991). Asking people to report on their emotions may have served to hold the manipulation longer. Note that appraisals other than outcome desirability and agency (e.g. certainty) were collected as possible covariates, as were some of their related emotional responses (e.g. hope and anxiety). While not of intrinsic interest, there is evidence that these other appraisals have some small effects on behaviour in response to emotions. It was anticipated that one type of emotion would dominate in response to each scenario; however, in order to account for possible mixed emotions the complete set of emotions (those listed in Table 3) were measured.

Participants were then asked to make a repurchase choice based on a large choice set (9 phones) with detailed product feature information (11 attributes). The brand by attribute matrix is depicted in the data collection instrument shown in Appendix 3. Information search was done via a web-based interface, where the information in a cell was made visible by clicking on that cell. The amount and order of information consulted, the time taken to make the decision, and the final choice were monitored and recorded electronically. Offering a wide choice set with extensive product information differs from most studies of consumer decision-making, which often use small brand by attribute matrices or choice sets (Luce, 1998), adding to the realism of the task. The same information set and format were used for each of the six possible product repurchase decision scenarios. Keeping a controlled information format allowed for more direct comparability of time spent and information searched for each brand considered.

Real brands and product information were used to better simulate reality and thus increase external validity. While it has been argued that brand effects can interfere with analysis (Keller, 1993), brand names are often used as an important piece of decision-making information (Dawar and Parker, 1994) and may be used as a heuristic for simplifying decision processes (Broniarczyk, Hoyer and McAlister, 1998). Conversely, brand switching may act as an indicator of more extensive processing because more information must be gathered about the new brands being considered. Removing brand names as an important piece of product information would be detrimental to analysis.

As has been done in other studies, a combination of the decision-making measures (time spent, amount of information searched and order of information search) were used to infer the extensiveness of decision-making (Lewisohn and Mano, 1993; Luce, Bettman and Payne, 1997). These past studies have demonstrated that the real time measures used are valid representations of the construct under consideration. Total time spent was measured by recording the time at the beginning and end of their decision-making process (when respondents hit the “begin” and “finished” buttons). The amount and order of information searched was measured by having subjects click on cells in the information matrix to view the information, and recording each cell clicked in order. The number of cells clicked indicated the amount of information searched, while counting lateral and vertical movement around the matrix determined if information was searched primarily by brand or by attribute (Luce, Bettman and Payne, 1997).

Subjects were then asked to respond to a series of supplemental follow-up questions about decision outcomes, such as whether they believed the decision to be an important one, their satisfaction with their decision, their confidence with their decision, whether they believed that their decision was a wise one, and whether it left them better or worse off. While satisfaction is typically measured with multi-item scales, it is done in the context of expectation disconfirmation once a product has been used (Westbrook and Oliver, 1991). In

this case the respondent would not have actually used the chosen product. Given the hypothetical purchase context, it was decided that a single item scale would suffice. Thus, single item measures of decision importance, satisfaction and confidence were included. There was also a 5-item scale that captured idiosyncratic decision-making style to monitor this possible covariate (a reduced version of Schwartz et al.'s (2002) maximizer/satisficer scale).

### ***Data Analysis***

Results for study 1 will be reported in Chapter 5. Cronbach's alphas will first be used to check scale reliabilities. Then factor analysis will be used to test the discriminant validity of emotion measures. Manipulation checks will be conducted on the appraisal measures using ANOVAs to ensure that appraisals were controlled for appropriately by each of the experimental conditions' vignettes. Step-down MANOVA, as applied by Nyer (1997), tests mediation effects when there are multiple groups. It will be used to determine whether appraisals directly influence consumer decision-making processes or whether the relationship is mediated by emotions (hypotheses 1a and 1b). Paired contrasts will be used to determine whether the strongest emotions occurred as predicted in of the six appraisal conditions (hypotheses 2a-f). Correlations will be used to determine whether different specific emotions showed significant relationships with consumer decision-making variables (hypotheses 3a-f). Individual ANOVAs will then be carried out for each of the decision-making variables to determine if different appraisal combinations have different effects on consumer decision-making process variables (hypotheses 4-7).

### **Study 2**

The second study involved a critical incident narrative technique, as used by Ruth, Brunel and Otnes (2002) and Tiedens and Linton (2001). Subjects were asked to recall their last car purchase. They were asked to describe the situation that led to the purchase, as well as the decision-making process they followed while making the purchase. While this study did not

have unanticipated forced repurchase as a requirement, decision-making processes were expected to remain consistent with hypotheses across purchase decision-making conditions. Because this study asked subjects to recall a past situation that led to a purchase rather than providing a scenario, memory effects would make responses more holistic, particularly in relation to dependent variables. There is a lack of reliability associated with reports of recalled emotions, a limitation recognized by researchers throughout the emotions field. In order to minimize this effect and thus increase reliability and validity of self-reports, respondents were asked to spend several minutes reconstructing the entire purchase situation in order to make the situation and its associated emotions as salient as possible. While emotional responses may be less accurate using this method, respondents would be able to respond more accurately to questions relating to the decision making process and its associated outcomes than respondents in the first study who did not make real purchases and did not have the opportunity to experience their chosen products.

### ***Sample Selection***

Bond University Human Research Ethics Committee (BUHREC) approved this study with protocol number RO391. 164 subjects were recruited from a community organization for the study, with \$2 being donated to their organization for each returned response. To minimize non-response, recruitment flyers were provided containing the web site address of the data collection instrument, the \$2 response incentive, and the response deadline for collecting the incentive. Participants had three weeks to respond to the survey, with two reminders being given after the initial recruitment effort. Having a community sample provide information in a different product category in study 2 was intended to enhance the external validity of the findings of Study 1. Further, because respondents had actually used their selected product, questions about their satisfaction with their purchase would be a meaningful consideration in analysis.

### ***Data Collection***

Data were collected through a web-based form interface. In this study, subjects were asked to recall their most recent car purchase (see Appendix 4 for a sample data collection instrument). Individual responses to appraisal questions were used to assign them to their appropriate combined appraisal categories. As a result, a seventh condition also emerged. It included cases in which situations were deemed neither desirable nor undesirable (neutral), and/or those in which no single agent was deemed responsible. However, in order to be truly neutral, a case would have to be neutral with respect to outcome desirability *and* rate *all three* agents as being equally responsible for the situation, meaning that many cases in this group would not fit the criteria of neutrality and would have to be discarded from analysis.

As in study 1, respondents were first asked about their current car, their preferred brand, their product involvement, and their category expertise. Then they were asked to write for approximately five minutes describing the events leading to the purchase need in as much detail as possible. Writing in-depth about the event was intended to stimulate recall of the situations, along with impressions and emotions during the situations, in order to enhance the validity of responses. Redelmeier and Kahneman's (1989) Peak-End Rule shows that people tend to recall the most extreme or "peak" portions of emotion-laden memories along with their outcomes, regardless of the duration of the process; this should have only served to strengthen the validity of results.

Subjects were then asked to respond to the same approximate set of questions about their felt emotions and appraisals of the situation as in study 1. The appraisal questions were modified in accordance with study 1 results. The agency questions were changed from two-item scales of responsibility and control to single-item measures of responsibility only. Supplementary questions that were altered included the fairness scale (changed from cheater or wronged and fair to harmed and fair) and certainty (changed from certain and understand to certain and clear). A two-item goal related scale (achieve and goal) was added to this study



for use in another study. Changes to the emotions scales included clarifying one of the pride items (from pleased to pleased with yourself) and adding a third ashamed item to the guilt scale. Reliability and validity were assured through the same means as the first study.

In the next section, participants were asked to describe their actual purchase decision-making process in as much detail as possible and to recall as much product information as they could about the brands that they considered. Again, this step was intended to jog the respondent's memory of the purchase decision-making process. Respondents were asked to estimate the amount of time they spent making the purchase decision, estimate the number of product features that were important in their search, to report on the number of car brands they considered, and to rate whether they believed they spent more time, searched more information, and put forth more effort when making their decision than the average car buyer. Memories are malleable and can be poorly reconstructed (Braun, 1999), hence it was expected that there would be much wider variance in these responses than was the case in study 1. While it was understood that these responses may be inaccurate, it was considered that the consumers' perceptions about their decision processes are more important than the actual figures. Thus, while these perceived measures may have produced lower levels internal reliability and validity than the real time measures, perceptions could be more conceptually relevant to the relationships under investigation in this research.

Following their decision-making process responses, subjects were asked to respond to a similar set of decision style and outcome questions as were given in the vignette study. These dependent variables were more relevant in this study than the first because respondents would be responding to these questions with respect to their purchase outcomes rather than just their decision outcomes.

### ***Data Analysis***

Results for study 2 will be reported in Chapter 6. Cronbach's alphas will first be used to check scale reliabilities. Then factor analysis will be used to test the discriminant validity of

emotion measures. Manipulation checks are redundant in this study because self-reported information will be used to place respondents into experimental groups. As such, sample sizes may not be even across conditions. As such, the study may violate the assumptions for using ANOVA and MANOVA. Instead, mediation analysis using regression, as applied by Baron and Kenny (1986), will test mediation effects to determine whether appraisals directly influence consumer decision-making processes or whether the relationship is mediated by emotions (hypotheses 1a and 1b). Paired contrasts will be used to determine whether the strongest emotions occurred as predicted in of the six appraisal conditions (hypotheses 2a-f). Nested regression analyses will then be carried out for each of the decision-making variables to determine if different appraisal combinations (hypotheses 4-7) and different specific emotions (hypotheses 3a-f) have different effects on consumer decision-making process variables. This is done by running a full regression analysis, running a reduced model that excludes the variables of interest, and then comparing the results to see if the excluded variables have a significant effect on the overall model.

### **Study 3**

As indicated earlier, this study was added after analysing the results from studies 1 and 2. Weak but promising results led the researcher to decide to replicate study 1, relaxing the controls on vignette design to make them more believable and to increase manipulation strengths and subsequent effect sizes. It was hoped that increased effect sizes might allow some unsubstantiated hypotheses to achieve significance. Study 1 was chosen as the study to replicate because its experimental design still offered the highest likelihood of uncovering the small effect sizes proposed. There was a substantially higher degree of control in this design than in study 2, allowing for more certain attribution of findings to the study manipulations. There was also difficulty in getting even representative across experimental conditions in study 2.

### ***Sample Selection***

This study was re-run under the same protocol number as study 1. It mimicked study 1; the design was the same 2x3 between subjects design using a student sample for the same incentive and a web-based data collection interface. After using one class for pre-testing during the semester of data collection, the study sample was slightly smaller than in study 1 (n=166). To minimize non-response, recruitment flyers were provided containing the web site address of the data collection instrument, the response incentive, and the response deadline for collecting the incentive. Students had three weeks to respond to the survey, with two reminders being given after the initial recruitment effort. These efforts also achieved an approximate response rate of 75%. The number of respondents in each of the six cells ranged from 25 to 30.

### ***Data Collection***

New vignettes were developed and pre-tested that increased manipulation strength in the desired directions across all conditions. The final scenarios (found in Appendix 5) were not as strictly controlled as they were in study 1, using the logic that if a very strong scenario can not demonstrate the theorized effects, control is a moot point. Scenario 1 involved being employee of the month and being awarded a gift certificate for a new mobile phone. The second scenario involved being given a gift certificate as a gift. The third scenario involved winning a random draw for a mobile phone gift certificate. Scenario 4 involved losing a friend's beloved mobile phone and having to replace it with your own money. Scenario 5 involved having one's beloved mobile phone stolen and having to replace it out of pocket. Finally, the sixth scenario involved a random malfunction in one's beloved mobile phone and the need to replace it with one's own money.

Measures of appraisals and emotions remained largely the same as in study 2, again ensuring the reliability and validity of measures. The appraisal measures were identical to those used in study 2, but were reordered so that the outcome desirability scale and three

agency items appeared first, followed by the supplementary appraisal scales. The certainty related emotion measures (anxious and hopeful) were removed from this study to speed the response process and ensure that respondents answered the relevant appraisal questions as quickly as possible.

The assortment of mobile phones in the decision matrix was modified for study 3 to better reflect sample demand in the mobile phone market. Measures of both actual and perceived decision-making processes were taken to see if they were influenced differently; hence, both the actual search measures used in study 1 were taken, as were the perceived process measures used in study 2. Comparing the two sets of results could serve to validate either the convergence of or discrimination between perceived versus actual decision-making constructs under investigation. Changes to the mobile phone assortment were based on brand preference, ownership and selection responses in study 1. Nokia, Samsung and Sony-Ericsson were used. There was one model of each brand chosen at three approximate price points (\$400, \$500, \$600) with a \$500 average model price, the same average price as study 1. The data collection instrument may be found in Appendix 6.

### ***Data Analysis***

Results for study 3 will be reported in Chapter 7. Analyses will mimic those in study 1. Cronbach's alphas will first be used to check scale reliabilities. Then factor analysis will be used to test the discriminant validity of emotion measures. Manipulation checks will be conducted on the appraisal measures using ANOVAs to ensure that appraisals were controlled for appropriately by each of the experimental conditions' vignettes. Step-down MANOVA, as applied by Nyer (1997), tests mediation effects when there are multiple groups. It will be used to determine whether appraisals directly influence consumer decision-making processes or whether the relationship is mediated by emotions (hypotheses 1a and 1b). Paired contrasts were used to determine whether the strongest emotions occurred as predicted in of the six appraisal conditions (hypotheses 2a-f). Correlations will be used to determine whether

different specific emotions showed significant relationships with consumer decision-making variables (hypotheses 3a-f). Individual ANOVAs will then be carried out for each of the decision-making variables to determine if different appraisal combinations have different effects on consumer decision-making process variables (hypotheses 4-7).

### Chapter 5: Study 1 Results

During data collection respondents were assigned to one of six scenarios corresponding to the 2 x 3 study design. Each of these groups corresponded to an outcome group (desirable/undesirable) and an agent group (self/other/circumstance). See Table 6 for scenario numbers and their corresponding outcome and agent groups.

Dependent variables were calculated as follows. Amount of search was the number of cells viewed in the information matrix (found in the data collection instrument in Appendix 3). Time spent was the number of seconds spent searching the information matrix before a decision was made. Search effort was the average amount of time spent per piece of information viewed. Search pattern was formulated using Luce, Bettman and Payne's (1997) calculation of searching a decision matrix primarily by brand or by attribute. It is a value between -1 and 1 representing the ratio of the numbers of within brand shifts versus across attribute shifts made during search, where negative values indicate the percentage of search done by attribute and positive values indicate the percentage of search done by brand.<sup>13</sup> A dependent measure of decision satisfaction was also included although it is a decision-making

**Table 6: Study 1 Scenario Numbers and Their Associated Grouping Variables**

|         |             | Agent  |   |  |
|---------|-------------|--|---|--|
|         |             | self   | other   | circumstance   |
| Outcome | desirable   | <u>Scenario 1</u><br>desirable<br>self-agent<br>n=29   | <u>Scenario 2</u><br>desirable<br>other-agent<br>n=29   | <u>Scenario 3</u><br>desirable<br>circumstance-agent<br>n=30   |
|         | undesirable | <u>Scenario 4</u><br>undesirable<br>self-agent<br>n=25 | <u>Scenario 5</u><br>undesirable<br>other-agent<br>n=29 | <u>Scenario 6</u><br>undesirable<br>circumstance-agent<br>n=28 |

n = 170

<sup>13</sup> Shifts were measured in order, as moves from one cell to the next only. If someone moved within price, then within brand and then viewed another price, that shift was not included in the within attribute calculation. The equation used was (number of within brand shift – number of within attribute shifts) / (number of within brand shift + number of within attribute shifts). Diagonal shifts (those that were neither within brand nor within attribute) were not included in the calculation, thus the total number of within brand shifts and within attribute shifts does not necessarily equal the total number of cells viewed -1.

outcome, not a process.

Several covariates were measured for use in the study: involvement, product category knowledge, and decision making style. None of the covariates had any significant effects and therefore will not be discussed further.

### ***Reliability and Validity Tests***

Scale items and their associated Cronbach's alphas may be found in Table 7. The self-agent and circumstance-agent scales did not meet the  $\alpha=0.60$  cut-off standard of scale reliability. As a result of these checks, scale items were dropped so that the agency scales became single item measures. To maintain consistency, single item measures were adopted for all three agency variables, despite the other agency scale showing adequate reliability. In line with Smith and Ellsworth's (1985) definitions of self-other responsibility and human-circumstance control, the single item measures chosen for inclusion were self-responsible, other-responsible and circumstance-control.

People are very good at discriminating between specific emotions. Because people can discern differences between very similar emotion words so readily, it may be difficult to capture single emotions with multiple measures. In order to determine whether multi-item

**Table 7: Study 1 Scale Items and Associated Reliability Measures**

| Appraisal scale items    | $\alpha$ level | Emotion Scale items | $\alpha$ level | DV Scale items | $\alpha$ level |
|--------------------------|----------------|---------------------|----------------|----------------|----------------|
| favourable               | .766           | proud               | .725           | dec-confident  | .890           |
| desirable                |                | pleased             |                | dec-satisfied  |                |
| self responsible         | .515           | appreciation        | .918           | dec-wise       |                |
| self control             |                | grateful            |                |                |                |
| other responsible        | .799           | pleasant surprise   | .843           |                |                |
| other control            |                | delight             |                |                |                |
| circumstance responsible | .181           | regret              | .635           |                |                |
| circumstance control     |                | guilt               |                |                |                |
|                          |                | annoyed             | .892           |                |                |
|                          |                | angry               |                |                |                |
|                          |                | disappointed        | .871           |                |                |
|                          |                | frustrated          |                |                |                |
|                          |                | sadness             | .841           |                |                |
|                          |                | misery              |                |                |                |

**Table 8: Study 1 Principal Components Analysis of Emotion Measures to Test for Discriminant Validity**

|                                | Factor Components* |      |      |      |      |      |      |
|--------------------------------|--------------------|------|------|------|------|------|------|
|                                | 1                  | 2    | 3    | 4    | 5    | 6    | 7    |
| <b><u>Initial Solution</u></b> |                    |      |      |      |      |      |      |
| Proud                          | .891               |      |      |      |      |      |      |
| Pleased                        |                    |      | .770 |      |      |      |      |
| Appreciation                   |                    | .676 | .591 |      |      |      |      |
| Grateful                       |                    | .715 | .584 |      |      |      |      |
| Pleasant surprise              |                    |      | .878 |      |      |      |      |
| Delight                        |                    |      | .811 |      |      |      |      |
| Regret                         |                    |      |      | .945 |      |      |      |
| Guilt                          |                    |      |      |      | .907 |      |      |
| Annoyed                        |                    |      |      |      |      | .884 |      |
| Angry                          |                    |      |      |      |      | .767 |      |
| Disappointed                   |                    |      |      |      |      | .775 |      |
| Frustrated                     |                    |      |      |      |      | .862 |      |
| Sad                            |                    |      |      |      |      | .512 | .867 |
| Misery                         |                    |      |      |      |      |      | .723 |
| <b><u>Reduced Solution</u></b> |                    |      |      |      |      |      |      |
| Proud                          | .962               |      |      |      |      |      |      |
| Appreciation                   |                    | .827 |      |      |      |      |      |
| Grateful                       |                    | .842 |      |      |      |      |      |
| Pleasant surprise              |                    |      | .910 |      |      |      |      |
| Guilt                          |                    |      |      | .979 |      |      |      |
| Annoyed                        |                    |      |      |      | .796 |      |      |
| Angry                          |                    |      |      |      | .763 |      |      |
| Disappointed                   |                    |      |      |      |      | .782 |      |
| Sad                            |                    |      |      |      |      | .654 | .621 |
| Misery                         |                    |      |      |      |      |      | .897 |

\*Loadings under 0.50 suppressed.

scales were appropriate for use with the emotion measures, principal components analysis was used to test discriminant validity of these measures. The seven anticipated emotion factors were forced using an equamax rotation because previous studies have shown that the use of eigenvalues will simply yield a two factor (positive/negative emotion) result. The initial rotated component matrix in Table 8 shows that some of the measures used did not load as anticipated. Where items were not loading as anticipated, the secondary scale item that was intended to reflect the main emotion of interest was removed and the principal components analysis re-run using just the principal measure, as seen in the reduced component matrix. Two noteworthy findings were that disappointment and sadness loaded together while regret and guilt loaded as different factors. In the reduced solution, the only unanticipated loading



stemmed from disappointment, which loaded with sadness instead of on its own as anticipated. However, having disappointment and sadness load together supports the theoretical arguments posed for linking the two emotions in the undesirable circumstance-caused condition and a post-hoc reliability test yielded a result of  $\alpha=0.830$ .

Discriminant validity is evident in the reduced component matrix. As a result of the factor analytic results, pleased with myself, delight, regret, frustrated, and misery were dropped from further analysis. Single item measures were used for pride, pleasant surprise, guilt, disappointment and sadness. The misery scale item was removed because the type of sadness that is akin to disappointment (as opposed to misery) is the type that was intended to relate to the theory in question. Single composite measures, calculated as the mean of the multi-item scales, were computed for the appreciation and anger measures. Similar composites were used for the desirability appraisal and decision satisfaction dependent variable scales shown in Table 6.

### ***Manipulation Checks***

Manipulation checks were performed on the six scenarios in Table 6 with regard to subjects' perceptions of the desirability (desirable/undesirable) and attributed cause (self/other/ circumstance) of the purchase using the collected appraisal data (calculated as discussed in reference to Table 6). See Table 9 for the ANOVA results comparing these appraisal measures across conditions. Manipulations were, for the most part, successful. They were significant, just not high. For example, desirable conditions were significantly more desirable than the undesirable conditions, but only achieved desirability ratings of about four on a seven point scale, where one was not at all desirable and seven was extremely desirable. Resulting effects in the study were consequently weak, leading to mostly insignificant findings. Consequently, it was decided to re-run the study as study 3 with relaxed experimental controls and stronger manipulations; that study is reported in Chapter 6. To determine ways to improve the design of study 1, data were analysed in full and are

**Table 9: Study 1 ANOVA Results for Appraisal Manipulation Checks****Dependent Variable: Outcome Desirability**

|              |                        | <b>Means</b>   |     | <b>Agent</b>  |              |              |
|--------------|------------------------|----------------|-----|---------------|--------------|--------------|
|              |                        | <b>Outcome</b> |     | 1             | 2            | 3            |
|              |                        | 1              | 2   | <b>4.1379</b> | <b>3.069</b> | <b>4.166</b> |
|              |                        |                |     | 2.660         | 2.650        | 2.553        |
|              |                        | SS             | df  | MS            | F            | Sig.         |
| Main Effects | <b>Agent</b>           | 11.327         | 2   | 5.663         | 2.705        | .070         |
|              | <b>Outcome</b>         | 58.256         | 1   | 58.256        | 27.827       | <b>.000</b>  |
| Interaction  | <b>Agent x Outcome</b> | 11.669         | 2   | 5.835         | 2.787        | .065         |
|              | <b>Model</b>           | 82.672         | 5   | 16.534        | 7.898        | .000         |
| Residual     |                        | 343.334        | 164 | 2.094         |              |              |
| Total        |                        | 426.006        | 169 | 2.521         |              |              |

**Dependent Variable: Self-Caused (Agent)**

|              |                        | <b>Means</b>   |     | <b>Agent</b> |        |             |
|--------------|------------------------|----------------|-----|--------------|--------|-------------|
|              |                        | <b>Outcome</b> |     | 1            | 2      | 3           |
|              |                        | 1              | 2   | <b>3.551</b> | 2.428  | 2.266       |
|              |                        |                |     | <b>4.000</b> | 3.448  | 1.851       |
|              |                        | SS             | df  | MS           | F      | Sig.        |
| Main Effects | <b>Agent</b>           | 78.163         | 2   | 39.341       | 14.061 | <b>.000</b> |
|              | <b>Outcome</b>         | 5.068          | 1   | 5.068        | 1.811  | .180        |
| Interaction  | <b>Agent x Outcome</b> | 14.828         | 2   | 7.414        | 2.650  | .074        |
|              | <b>Model</b>           | 97.991         | 5   | 19.598       | 7.004  | .000        |
| Residual     |                        | 450.476        | 161 | 2.798        |        |             |
| Total        |                        | 548.467        | 166 | 3.304        |        |             |

**Dependent Variable: Other-Caused (Agent)**

|              |                        | <b>Means</b>   |     | <b>Agent</b> |              |             |
|--------------|------------------------|----------------|-----|--------------|--------------|-------------|
|              |                        | <b>Outcome</b> |     | 1            | 2            | 3           |
|              |                        | 1              | 2   | 1.821        | <b>4.777</b> | 3.633       |
|              |                        |                |     | 1.960        | <b>5.428</b> | 2.481       |
|              |                        | SS             | df  | MS           | F            | Sig.        |
| Main Effects | <b>Agent</b>           | 288.132        | 2   | 144.066      | 52.744       | <b>.000</b> |
|              | <b>Outcome</b>         | .760           | 1   | .760         | .278         | .599        |
| Interaction  | <b>Agent x Outcome</b> | 24.169         | 2   | 12.085       | 4.424        | .013        |
|              | <b>Model</b>           | 312.405        | 5   | 62.481       | 22.875       | .000        |
| Residual     |                        | 434.298        | 159 | 2.731        |              |             |
| Total        |                        | 746.703        | 164 | 4.553        |              |             |

**Dependent Variable: Circumstance-Caused (Agent)**

|              |                        | <b>Means</b>   |     | <b>Agent</b> |       |              |
|--------------|------------------------|----------------|-----|--------------|-------|--------------|
|              |                        | <b>Outcome</b> |     | 1            | 2     | 3            |
|              |                        | 1              | 2   | 3.172        | 3.964 | <b>3.833</b> |
|              |                        |                |     | 3.080        | 4.310 | <b>3.107</b> |
|              |                        | SS             | df  | MS           | F     | Sig.         |
| Main Effects | <b>Agent</b>           | 29.760         | 2   | 14.880       | 4.347 | <b>.014</b>  |
|              | <b>Outcome</b>         | 1.106          | 1   | 1.106        | .323  | .571         |
| Interaction  | <b>Agent x Outcome</b> | 8.352          | 2   | 4.176        | 1.220 | .298         |
|              | <b>Model</b>           | 38.834         | 5   | 7.767        | 2.269 | .050         |
| Residual     |                        | 557.994        | 163 | 3.423        |       |              |
| Total        |                        | 596.828        | 168 | 3.553        |       |              |

reported here in their entirety.

Respondents in desirable outcome groups reported significantly higher levels of outcome desirability than undesirable outcome groups ( $p < .001$ ), with no significant agency ( $p = .070$ ) or interaction effects ( $p = .065$ ).

Self- and other agent manipulations were generally successful. Self-agency showed only a main agent effect ( $p < .001$ ) with no significant outcome ( $p = .180$ ) or interaction ( $p = .074$ ) effects. Other agency had a significant main effect ( $p < .001$ ) as well as a significant agency by outcome interaction effect ( $p = .013$ ), with a non-significant outcome main effect ( $p = .599$ ). The interaction is evidenced through a set of paired contrasts showing that respondents in the desirable other- agent scenario reported significantly lower levels of desirability than those in the desirable self ( $p = .012$ ) and circumstance ( $p = .009$ ) conditions.

Circumstance-caused agency, as anticipated, had mixed results. Circumstance agency had a significant agency main effect ( $p = .014$ ) with no outcome ( $p = .571$ ) or interaction ( $p = .298$ ) effect. Respondents rated circumstance more highly as the cause of the circumstance-based scenarios (3 and 6) than they rated other or self as the causes of those scenarios; however, upon closer inspection the patterns were not clean. Circumstance was not seen as being a significantly stronger contributor to the situation than self ( $p = .184$ ) or other agents ( $p = .793$ ) in desirable conditions, nor was it significantly stronger than self-agent cause in undesirable circumstance conditions ( $p = .956$ ). Also, circumstance was rated as being a stronger contributing factor to other-caused scenarios (2 and 5) than circumstance-caused ones.

While manipulations were generally successful in distinguishing between respondent groups across treatment conditions, the overall manipulations were not high. Mean reports of desirability in desirable conditions hovered around the neutral condition of four on a seven point scale. By not achieving particularly strong positive manipulations, the anticipated effects on decision-making outcomes may have been correspondingly reduced. In particular,

because circumstance manipulations were mixed, the already small anticipated effects would not have been evidenced as proposed.

### ***Direct and Indirect Effects of Appraisals on Decision-making Processes***

The direct versus indirect effects of emotions were examined first. Because several dependent variables were being considered, the standard step-down regression test for mediation used by Baron and Kenny (1986) was not appropriate. Instead, a three stage step-down MANOVA approach, similar to that used by Nyer (1999) was employed (see Table 10).

First, a 2x3 (outcome desirability by agency appraisal) MANOVA test was conducted using the four decision-making process and seven emotion measures as dependent variables. Results indicated that outcome and agency appraisals have significant main effects on these variables. Inspection of univariate F-tests indicated that significant effects were derived from all of the seven emotion variables ( $p < .05$ ) for both outcome desirability and agency main effects.

Next, the emotions were used as covariates with only the decision-making variables as dependent variables. Once emotions were removed as dependent variables, the significant effects of appraisals on decision-making disappeared, indicating that the effects that appraisals had on decision-making processes were not direct. Inspecting covariates, each of three dependent variables showed significant relationships with one of the emotion covariates

**Table 10: Study 1 Step-down Analysis MANOVA Results (p-values of multivariate F-tests)**

| Effect                    | Step 1<br>dependent<br>variables: E & D<br>covariates: none | Step 2<br>dependent<br>variables: D<br>covariates: E | Step 3<br>dependent<br>variables: E<br>covariates: D |
|---------------------------|---|--|--|
| Hypothesis<br>(supported) |   | H1a<br>N   | H1b<br>Y   |
| Outcome                   | .000  | .113   | .000   |
| Agent                     | .000  | .095   | .000   |
| Outcome x Agent           | .543  | .349   | .539   |

Notes: E = emotions variables (pride, appreciation, pleasant surprise, guilt, anger, disappointment, sadness), D = decision-making variables (time spent, amount of search, search pattern, search effort), F-statistic = Wilk's Lambda

in univariate t-tests (time spent: pride,  $p=.023$ ; amount of search: guilty,  $p=.037$ ; search effort: guilty,  $p=.003$ ). Seeing only one significant effect in each test after seeing significant effects from each of the emotions in the previous analysis could flag a collinearity issue among the emotion variables, meaning that common variance from all of the emotion variables could be accounted for by one significant finding.

In the third step, the decision-making variables were used as covariates and the emotion variables were used as dependent variables. Multivariate results showed that outcome desirability and agency appraisals had significant main effects on emotions ( $p<.001$ ). With the exception of outcome, which had no main effect on pride ( $p=.086$ ), univariate F-tests showed that outcome and agency each had significant main effects on all remaining emotion variables. While no significant multivariate covariate relationship was found, univariate F-tests indicated a significant relationship between guilt and decision-making variables ( $p=.022$ ). However, univariate t-tests showed only a marginally non-significant relationship with search effort ( $p=.053$ ). These mixed results could provide another collinearity indicator.

This test strongly supports the proposition that appraisals cause emotions. Evidence among covariate results indicating that emotions influence decision-making processes is weaker, but present. Therefore the hypothesis that the influence of outcome desirability and agency on consumer decision-making processes will be mediated by emotions (H1b) was supported, while H1a, outcome desirability and agency will influence consumer decision-making processes directly, was not supported.

### ***The Effects of Outcome Desirability and Agency Appraisals on Emotions***

Hypotheses regarding the dominant emotion in each scenario were tested next. Paired contrasts were conducted between all seven emotion means for each scenario condition. Emotional dominance was not clearly established as hypothesized (see Table 11). Only scenarios 3, 5 and 6 achieved the highest levels of their predicted dominant emotions. The strongest emotion felt in five of the six conditions was anger, which had the highest absolute

**Table 11: Study 1 Emotional Response Means Across Scenarios**

| Scenario | Hypothesis (supported) | pride        | appreciation | pleasant surprise   | guilt        | anger               | disappointment | sadness      |
|----------|------------------------|--------------|--------------|---------------------|--------------|---------------------|----------------|--------------|
| 1        | H2a N                  | <u>1.724</u> | 3.224        | <b>3.862</b>        | 1.862        | 3.810*              | 3.241*         | 2.2586       |
| 2        | H2b N                  | 1.571        | <u>2.892</u> | 3.392               | 1.441        | <b>4.722</b>        | 3.928          | 3.464        |
| 3        | H2c Y                  | 2.724        | 4.035*       | <u><b>4.344</b></u> | 0.775        | 3.551*              | 3.034          | 2.069        |
| 4        | H2d N                  | 1.720        | 3.120        | 2.920               | <u>2.059</u> | 4.800*              | <b>5.000</b>   | 4.000        |
| 5        | H2e Y                  | 1.142        | 1.603        | 1.827               | 1.883        | <u><b>6.160</b></u> | 5.620          | 4.620        |
| 6        | H2f Y                  | 1.785        | 2.666        | 2.928               | 1.288        | <b>5.071</b>        | <u>4.714*</u>  | <u>3.535</u> |

Notes: **bold** indicated the highest emotion measure within a scenario, \* shows emotions reported within a scenario that are not significantly different from the highest mean (in **bold**), underlined indicates where highest mean was anticipated.

mean in scenarios 2, 5 and 6 and was also statistically equivalent to the highest mean in scenarios 3 and 4. Disappointment was the strongest emotion felt in scenario 4. The fact that positive emotions did not dominate in the desirable conditions is not surprising given the failure of manipulations to achieve desirable situation appraisals (recall that desirability ratings in desirable conditions averaged four on a seven point scale). Strong feelings of disappointment in scenario 4 are not surprising because disappointment can be either person-related or circumstance-related, a subtlety which was not captured by the measure used. Anger may be explained in the circumstance-related situation of scenario 6 because, as was mentioned in Chapter 3, people often assign human characteristics to objects and events. In short, it seems that having to replace a phone made people angry regardless of the overall benefit derived. Thus, H2c that desirable circumstance-caused events lead to greater experienced feelings of pleasant surprise than the other measured emotions, H2e that undesirable other-caused events lead to greater experienced feelings of anger than the other measured emotions and H2f that undesirable circumstance-caused events lead to greater experienced feelings of disappointment than the other measured emotions were supported, while H2a that desirable self-caused events lead to greater experienced feelings of pride than the other measured emotions, H2b that desirable other-caused events lead to greater

experienced feelings of appreciation than the other measured emotions and H2d that undesirable self-caused events lead to greater experienced feelings of guilt than the other measured emotions were not supported.

### ***Effects of Emotions on Decision-making Processes***

The next step was to analyse the effects that individual emotions had on decision-making variables. To determine if emotions have a significant influence on decision-making processes, a correlation matrix was examined (Table 12). Consistent with MANOVA results, three of the emotion variables showed significant relationships with decision-making variables. While guilt had the anticipated negative effect on search effort (time spent per piece of information viewed), it had a positive relationship with the overall amount of information searched. Because the directional results here were mixed, H3d that increased feelings of guilt lead to decreased consumer decision-making extensiveness was not fully supported. Pride and anger showed significant relationships with at least one of the decision-making variables; however, the correlations were directionally opposite to the relationships proposed. Thus, while emotions did affect decision-making extensiveness, none of hypotheses predicting their directionality (H3a-H3f) were supported by bi-variate correlations.

**Table 12: Study 1 Correlations Between Emotion and Decision-making Variables**

|                  | pride  | appreciation | pleasant surprise | guilt  | anger  | disappointment | sadness |
|------------------|--------|--------------|-------------------|--------|--------|----------------|---------|
| Time spent       | -.189* | .043         | .022              | .043   | -.076  | -.019          | .074    |
| Amount of search | -.134  | -.031        | -.037             | .163*  | -.018  | .039           | .060    |
| Search pattern   | -.187* | -.033        | -.060             | .063   | -.021  | .041           | .074    |
| Search effort    | -.019  | .110         | .112              | -.165* | -.143* | -.093          | -.083   |

\*p=.05.

**Table 13: Study 1 ANOVA Results for Effects of Appraisals on Decision-Making Processes**

|              |                 | <b>Time Spent</b> |           |              |          |             |
|--------------|-----------------|-------------------|-----------|--------------|----------|-------------|
|              |                 | <b>Means</b>      |           | <b>Agent</b> |          |             |
|              |                 | <b>Outcome</b>    |           | <b>1</b>     | <b>2</b> | <b>3</b>    |
|              |                 | <b>1</b>          |           | 177.83       | 169.93   | 147.37      |
|              |                 | <b>2</b>          |           | 213.52       | 211.21   | 191.96      |
|              |                 | <b>SS</b>         | <b>df</b> | <b>MS</b>    | <b>F</b> | <b>Sig.</b> |
| Main Effects | Agent           | 21921.932         | 2         | 10960.966    | .520     | .596        |
|              | Outcome         | 70051.639         | 1         | 70051.639    | 3.322    | .070        |
| Interaction  | Agent x Outcome | 561.350           | 2         | 280.675      | .013     | .987        |
| Model        |                 | 92108.976         | 5         | 18421.795    | .874     | .500        |
| Residual     |                 | 3458446.9         | 164       | 21088.091    |          |             |
| Total        |                 | 3550555.9         | 169       | 21009.207    |          |             |

|              |                 | <b>Amount of Information</b> |           |              |          |             |
|--------------|-----------------|------------------------------|-----------|--------------|----------|-------------|
|              |                 | <b>Means</b>                 |           | <b>Agent</b> |          |             |
|              |                 | <b>Outcome</b>               |           | <b>1</b>     | <b>2</b> | <b>3</b>    |
|              |                 | <b>1</b>                     |           | 21.66        | 15.90    | 18.30       |
|              |                 | <b>2</b>                     |           | 19.60        | 23.97    | 23.39       |
|              |                 | <b>SS</b>                    | <b>df</b> | <b>MS</b>    | <b>F</b> | <b>Sig.</b> |
| Main Effects | Agent           | 31.231                       | 2         | 15.615       | .053     | .949        |
|              | Outcome         | 627.776                      | 1         | 627.776      | 2.111    | .148        |
| Interaction  | Agent x Outcome | 748.643                      | 2         | 374.321      | 1.259    | .287        |
| Model        |                 | 1404.026                     | 5         | 280.205      | .942     | .455        |
| Residual     |                 | 48763.185                    | 164       | 297.336      |          |             |
| Total        |                 | 50164.212                    | 169       | 296.830      |          |             |

|              |                 | <b>Search Pattern</b> |           |              |          |             |
|--------------|-----------------|-----------------------|-----------|--------------|----------|-------------|
|              |                 | <b>Means</b>          |           | <b>Agent</b> |          |             |
|              |                 | <b>Outcome</b>        |           | <b>1</b>     | <b>2</b> | <b>3</b>    |
|              |                 | <b>1</b>              |           | .3249        | .2141    | .069        |
|              |                 | <b>2</b>              |           | .3948        | .5682    | .347        |
|              |                 | <b>SS</b>             | <b>df</b> | <b>MS</b>    | <b>F</b> | <b>Sig.</b> |
| Main Effects | Agent           | .984                  | 2         | .492         | 1.233    | .295        |
|              | <b>Outcome</b>  | 2.184                 | 1         | 2.184        | 5.471    | <b>.021</b> |
| Interaction  | Agent x Outcome | .548                  | 2         | .274         | .686     | .505        |
| Model        |                 | 3.627                 | 5         | .725         | 1.817    | .113        |
| Residual     |                 | 58.669                | 147       | .399         |          |             |
| Total        |                 | 62.296                | 152       | .410         |          |             |

|              |                 | <b>Effort</b>  |           |              |          |             |
|--------------|-----------------|----------------|-----------|--------------|----------|-------------|
|              |                 | <b>Means</b>   |           | <b>Agent</b> |          |             |
|              |                 | <b>Outcome</b> |           | <b>1</b>     | <b>2</b> | <b>3</b>    |
|              |                 | <b>1</b>       |           | 11.112       | 12.615   | 15.236      |
|              |                 | <b>2</b>       |           | 11.397       | 12.457   | 8.732       |
|              |                 | <b>SS</b>      | <b>df</b> | <b>MS</b>    | <b>F</b> | <b>Sig.</b> |
| Main Effects | Agent           | 51.200         | 2         | 25.600       | .184     | .832        |
|              | Outcome         | 177.912        | 1         | 177.912      | 1.282    | .259        |
| Interaction  | Agent x Outcome | 372.484        | 2         | 186.242      | 1.342    | .265        |
| Model        |                 | 595.145        | 5         | 119.029      | .857     | .511        |
| Residual     |                 | 20823.689      | 150       | 138.825      |          |             |
| Total        |                 | 21418.834      | 155       | 138.186      |          |             |



### ***Direct Effects of Outcome Desirability and Agency Appraisals on Decision-making Processes***

Finally, the direct effects of appraisals on decision making processes were examined. Given that the previous MANOVA test showed that appraisals did not have a direct effect on decision-making processes, these tests were not expected to demonstrate any significant relationships. Individual ANOVAs were conducted for all dependent variables and only one significant main effect was found (see Table 13). Search pattern was significantly different across desirable/undesirable outcome conditions ( $F=5.471$ ,  $p=.021$ ).<sup>14</sup>

T-tests were carried out across scenarios on the pattern of search variables to determine where differences existed. Results may be found in Table 14. From these paired tests, the comparison between desirable and undesirable other-caused conditions was significant, supporting the hypothesis that desirable other-caused events will lead to less extensive consumer decision-making processes than will undesirable other-caused events (H4b). All other hypotheses comparing levels of consumer decision-making extensiveness across study scenarios (H4a, H4c, H5a, H5b, H6b, H7a and H7b) were rejected. However, because H6a anticipated no significant difference between desirable other-caused and circumstance-caused conditions, this hypothesis was supported (by its non- significant finding). However, given

**Table 14: Study 1 Significance Levels of T-tests Between Treatment Conditions of Selected Decision-making Variables**

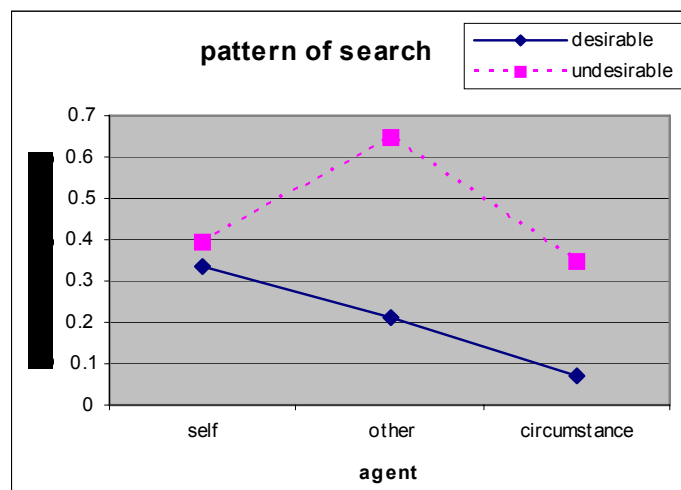
| <b>hypothesis</b>                   | <b>supported</b> | <b>compared scenarios</b> | <b>search pattern</b> |
|-------------------------------------|------------------|---------------------------|-----------------------|
| <i>outcome differences by agent</i> |                  |                           |                       |
| H4a                                 | N                | 1,4                       | .687                  |
| H4b                                 | Y                | 2,5                       | <b>.032*</b>          |
| H4c                                 | N                | 3,6                       | .171                  |

\*  $p<.05$

<sup>14</sup> The search pattern variable can lie anywhere between -1 and 1. Anything above 0 indicated that the person searched primarily by brand. 70% of respondents searched by brand and all group means were above 0. More within-brand search (i.e. search pattern responses closer to 1) indicates increased search depth, an indicator of extensiveness. Therefore, it may be concluded that more search within a brand (i.e. a more positive number) is more extensive.

that differences were not found in other groups, it is not clear whether this was an artefact of the weak manipulation or a valid finding.

Visual evidence was inspected in an attempt to uncover what patterns may be emerging from the data, albeit not statistically. Search pattern was used because it was the only decision-making variable to produce a significant result. Figure 5 shows that search pattern showed some visual support for some hypotheses in the anticipated directions. Interaction effects between the self/other agent and desirable/undesirable outcome conditions are evident in the diagrams, although no actual crossover occurred.



**Figure 6: Directional Effects of Appraisals on Search Pattern Across Study 1 Treatment Conditions**

## Chapter 6: Study 2 Results

In study 2, respondents were asked to recall their most memorable car purchase and respond to questions about associated appraisals, emotions and decision-making processes. Recall that the data collection instrument for study 2 may be found in Appendix 4. The dependent variables for study 2 were measured differently to those in study 1. A perceived time spent searching relative to the average person scale was used as the time spent measure. Search effort was also measured using a rating scale relative to the average person. Recalled number of brands and product features searched were multiplied together to calculate the amount of search. A comparative estimate of number of brands and product features searched was used to determine brand versus attribute based search pattern.<sup>15</sup> A measure of satisfaction with the decision outcome was also included.

As in study 1, several covariates were measured for use in the study: involvement, product category knowledge, and decision making style. None of the covariates had any significant effects and therefore will not be discussed further.

### *Allocation of Respondents to Treatment Conditions*

Respondents were assigned to groups using their appraisal measure responses. Desirability groups were assigned such that respondents with average desirability ratings above four (all scales were seven points where seven was high) were put in the desirable outcome group, those below four were put in the undesirable outcome group, and those who averaged four were put in a seventh group. Agency groups were assigned based on the highest score given for self, other and circumstance agent measures respectively. When there was a tie between self or other and circumstance, the human group (self or other) was chosen. When a tie for the highest agency response score occurred between either all three groups or the self and other groups, the respondents were assigned to the seventh group. The resulting

---

<sup>15</sup> The equation used was (number of brands searched – number of product features searched) / (number of brands searched + number of product features searched). The resulting number was a number between -1 and 1 where -1 indicated search purely by attribute and 1 indicated search purely by brand, as was the case in Study 1.

**Table 15: Study 2 Scenario Numbers and Their Associated Grouping Variables**

|                |                    | <b>Agent</b>   |  |   |
|----------------|--------------------|--|--|---|
|                |                    | <b>self</b>  | <b>other</b>   | <b>circumstance</b>   |
| <b>Outcome</b> | <b>desirable</b>   | <u>Scenario 1</u><br>desirable<br>self-agent<br>n=76   | <u>Scenario 2</u><br>desirable<br>other-agent<br>n=25  | <u>Scenario 3</u><br>desirable<br>circumstance-agent<br>n=15  |
|                | <b>undesirable</b> | <u>Scenario 4</u><br>undesirable<br>self-agent<br>n=13 | <u>Scenario 5</u><br>undesirable<br>other-agent<br>n=8 | <u>Scenario 6</u><br>undesirable<br>circumstance-agent<br>n=2 |
|                |                    | <b>Group Seven:</b> n=25                               |  |   |
|                |                    | n = 164  |  |   |

number of respondents in each condition is reported in Table 15. Approximately half of respondents considered the event a positive one and attributed responsibility for it to themselves, classifying them in scenario 1. Due to the large variance in group sizes and the small numbers of respondents in several of the groups, it was decided that exploring results for a neutral condition would not provide reliable insights; thus examination of a neutral condition was discarded. Highly variant group sizes also resulted in hypotheses being tested using different techniques to those used in Study 1 in some cases. Any reported results that do compare groups must be interpreted cautiously.

The distribution of responses was unexpected, prompting a qualitative analysis of scenario descriptions. Unfortunately, despite what were believed to be clear instructions asking respondents not to discuss anything to do with the search process or purchase itself in the initial question relating to need recognition, many people did so. Therefore, when they were asked to respond to questions about the situation, they were actually describing their emotions and appraisals related to the overall purchase situation rather than the events leading to it. While this poses an issue in terms of comparing these results with those of the previous study where incidental emotion was the focus, it can serve to broaden the scope of study by considering how integral appraisals and emotions influence consumer decision-making.

**Table 16: Study 2 Mean Outcome Desirability and Agency Responses Across Treatment Conditions.**

| Appraisal Measure          | Outcome Condition  | Agent Condition |              |              |
|----------------------------|--------------------|-----------------|--------------|--------------|
|                            |                    | self            | other        | circumstance |
| <i>desirability</i>        | <b>desirable</b>   | <b>5.723</b>    | <b>5.500</b> | <b>5.100</b> |
|                            | <b>undesirable</b> | 2.884           | 3.125        | 2.500        |
| <i>self-caused</i>         | <b>desirable</b>   | <b>6.03</b>     | 2.56         | 2.53         |
|                            | <b>undesirable</b> | <b>5.92</b>     | 2.25         | 2.50         |
| <i>other-caused</i>        | <b>desirable</b>   | 2.38            | <b>6.13</b>  | 1.00         |
|                            | <b>undesirable</b> | 2.12            | <b>6.08</b>  | 1.93         |
| <i>circumstance-caused</i> | <b>desirable</b>   | 2.12            | 2.72         | <b>5.60</b>  |
|                            | <b>undesirable</b> | 2.00            | 2.50         | <b>6.00</b>  |

In study 2, response means were more polar and clearly differentiated in the anticipated directions across treatment conditions than in study 1. Table 16 summarizes the appraisal means across treatment conditions. The ambiguities witnessed in study 1 in terms of the perceived causal agent across agency conditions did not reoccur. Group differences in terms of mean responses on desirability and agency questions were very clear and as anticipated. This was fortunate for two reasons. First, it increased the likelihood of finding significant results given that several cell sizes were small and standard deviations were correspondingly high. Second, the positive sample bias made it possible to study appraisal interaction effects for the desirable conditions above the neutral level (four out of seven) where outcome desirability means fell in study 1. In other words, while Study 1 was particularly useful for studying undesirable conditions, study 2 would now be useful for studying desirable ones.

### ***Reliability and Validity Tests***

Scale items and their associated Cronbach's alphas may be found in Table 17. The self agent, other agent, and circumstance agent measures were single items, so no reliabilities were computed. A shame measure was added to replace the regret measure that proved to be distinct from the guilt construct it was intended to measure in study 1. All reliabilities fell above  $\alpha=0.80$ , well above acceptable levels ( $\alpha=0.60$ ), thus no items were removed as a result of these tests.

**Table 17: Study 2 Scale Items and Associated Reliability Measures**

| Appraisal scale items          | $\alpha$ level | Emotion Scale items | $\alpha$ level |
|--------------------------------|----------------|---------------------|----------------|
| favourable                     | .724           | proud               | .928           |
| desirable                      |                | pleased with self   |                |
| Dependent Variable scale items | $\alpha$ level | appreciation        | .928           |
|                                |                | grateful            |                |
| relative effort                | .917           | pleasant surprise   | .831           |
| relative thoroughness          |                | delight             |                |
| relative quantity              | .924           | shame               | .869           |
| decision confidence            |                | guilty              |                |
| decision satisfaction          |                | annoyed             | .904           |
| decision wise                  |                | angry               |                |

A principal components analysis was again run to check the discriminant validity of emotion measures (Table 18). Because disappointment and sadness loaded together in study 1, only six factors were forced, again using an equamax rotation. Disappointment loaded highly with the anger measures in this study instead of loading with sadness. With that exception, the analysis supported the discriminant validity of the emotion measures used in study 2, thus no items were removed from further analyses. Single item measures for subsequent analyses were calculated using mean scale responses.

**Table 18: Study 2 Principal Components Analysis of Emotion Measures to Test Discriminant Validity**

|                                | Factor Components* |      |      |      |      |      |
|--------------------------------|--------------------|------|------|------|------|------|
|                                | 1                  | 2    | 3    | 4    | 5    | 6    |
| <b><u>Initial Solution</u></b> |                    |      |      |      |      |      |
| Proud                          | .883               |      |      |      |      |      |
| Pleased with myself            | .823               |      |      |      |      |      |
| Appreciation                   |                    | .885 |      |      |      |      |
| Grateful                       |                    | .872 |      |      |      |      |
| Pleasant surprise              |                    |      | .882 |      |      |      |
| Delight                        |                    |      | .507 |      |      |      |
| Shame                          |                    |      |      | .871 |      |      |
| Guilt                          |                    |      |      | .900 |      |      |
| Annoyed                        |                    |      |      |      | .816 |      |
| Angry                          |                    |      |      |      | .764 |      |
| Disappointment                 |                    |      |      |      | .729 |      |
| Sadness                        |                    |      |      |      |      | .915 |

\*Loadings under 0.50 suppressed.

### ***Direct and Indirect Effects of Appraisals on Decision-making Processes***

Because responses were not evenly distributed across cells and several of the treatment groups had such small sample sizes, MANOVA tests could not be carried out to compare the direct and indirect effects of appraisals and emotions on decision-making process and outcome variables. Despite having multiple dependent and mediating variables, Baron and Kenny's (1986) traditional mediation test, requiring 83 separate regression models, would be used to analyse whether outcome desirability and agency appraisals influence decision-making processes directly or indirectly through emotions. This test was conducted in three stages, using three sets of regression models. First, appraisal variables (main effects only) were regressed on each of the decision-making variables to determine whether they had a direct influence on decision-making processes (H1a). Next, emotions were regressed on each of the decision-making variables to see if they had any significant relationships with decision-making processes. Finally, appraisals (main effects) were regressed on each of the emotion variables to determine if outcome desirability and agency were significantly related to emotional responses. The resulting standardized beta coefficients and p-values for each regression model may be found in Table 19.

Because appraisals did not have any significant effects on decision-making processes, H1a was again not supported. Consistent with study 1 findings, appraisals were shown to significantly affect all seven emotion variables. Emotions also significantly affected a person's perceived decision-making effort. Because appraisals influenced emotions which subsequently had some effect on a consumer's decision-making process, the mediating effect of emotions was supported (H1b).

An interesting finding was that appraisals of the purchase situation influenced satisfaction with the decision outcome both directly and indirectly through emotional responses. This result could not be tested accurately in study 1 because respondents had not had an opportunity to use their hypothetical purchase, whereas study 2 respondents had actually

**Table 19: Study 2 Mediation Test Results Showing the Direct and Indirect Effects of Outcome Desirability and Agency Appraisals on Decision-making Processes**

|                    |         | Relative Time | Search Amount | Perceived Effort | Search Pattern | Decision Satisfaction |
|--------------------|---------|---------------|---------------|------------------|----------------|-----------------------|
| Desirability       | $\beta$ | -.019         | .133          | .052             | .050           | .065*                 |
|                    | p       | .807          | .110          | .516             | .545           | .000                  |
| Self-agent         | $\beta$ | .438          | -.010         | -.030            | .129           | -.048                 |
|                    | p       | .662          | .908          | .709             | .121           | .544                  |
| Other-agent        | $\beta$ | -.024         | -.116         | -.034            | .010           | -.119                 |
|                    | p       | .761          | .166          | .668             | .909           | .132                  |
| Circumstance-agent | $\beta$ | -.050         | .106          | -.062            | -.078          | .007                  |
|                    | p       | .528          | .201          | .433             | .352           | .925                  |
| Pride              | $\beta$ | .041          | .043          | .076             | -.097          | .256*                 |
|                    | p       | .608          | .606          | .340             | .247           | .001                  |
| Grateful           | $\beta$ | .021          | .017          | .119             | -.057          | .250*                 |
|                    | p       | .790          | .841          | .139             | .499           | .001                  |
| Pleasant surprise  | $\beta$ | .009          | .116          | .049             | -.070          | .163*                 |
|                    | p       | .906          | .169          | .539             | .403           | .040                  |
| Guilt              | $\beta$ | -.106         | -.002         | -.142            | .112           | -.299*                |
|                    | p       | .182          | .982          | .072             | .180           | .000                  |
| Anger              | $\beta$ | .014          | .006          | -.016            | .113           | -.302*                |
|                    | p       | .859          | .946          | .842             | .175           | .000                  |
| Disappointment     | $\beta$ | .049          | -.002         | -.005            | .108           | -.286*                |
|                    | p       | .544          | .978          | .948             | .199           | .000                  |
| Sadness            | $\beta$ | -.018         | -.024         | -.018            | .057           | -.155*                |
|                    | p       | .826          | .774          | .821             | .499           | .048                  |

\*  $p < .05$ 

|                    |         | pride | grateful | pleasant surprise | guilt <sup>+</sup> | anger  | disappoint | sadness <sup>+</sup> |
|--------------------|---------|-------|----------|-------------------|--------------------|--------|------------|----------------------|
| Desirability       | $\beta$ | .536* | .465*    | .539*             | -.270*             | -.568* | -.636*     | -.385*               |
|                    | p       | .000  | .000     | .000              | .001               | .000   | .000       | .000                 |
| Self-agent         | $\beta$ | .253* | .205*    | .182*             | .027               | -.305* | -.219*     | -.192*               |
|                    | p       | .001  | .010     | .021              | .734               | .000   | .006       | .015                 |
| Other-agent        | $\beta$ | .014  | .045     | .072              | .055               | .208*  | .149       | .124                 |
|                    | p       | .861  | .571     | .368              | .490               | .008   | .061       | .117                 |
| Circumstance-agent | $\beta$ | -.044 | -.018    | -.022             | .125               | .074   | .053       | .167*                |
|                    | p       | .584  | .820     | .779              | .114               | .353   | .512       | .034                 |

\*  $p < .05$ .

purchased and used their products. This result indicates the significant long term effects that appraisals and emotions can have on decision outcomes. In fact, 27% of the variance in decision satisfaction was explained by appraisals ( $R^2 = .277$ ), while 20% of the variance was explained by the seven emotions alone ( $R^2 = .206$ ), a substantial amount in the absence of any other factors.



### *Effects of Outcome Desirability and Agency Appraisals on Emotions*

Study 2 had less ambiguity in terms of the anticipated dominant emotions in each group. The anticipated dominant emotion was felt in four of the six conditions (See Table 20). Thus, only H2a that desirable self-caused events lead to greater experienced feelings of pride, H2b that desirable other-caused events lead to greater experienced feelings of appreciation, H2e that undesirable other-caused events lead to greater experienced feelings of anger and H2f that undesirable circumstance-caused events lead to greater experienced feelings of disappointment are supported. While support existed that desirable circumstance-caused events lead to greater experienced feelings of pleasant surprise (H2c) in study 1, no such support exists in study 2. Consistent with study 1, guilt was not felt strongly in scenario 4, leading to rejection of H2d. Findings for H2a-c relating to desirable events should be more true to life in study 2 than those in Study 1 because of the comparatively stronger levels of desirability in this study.

### *Effects of Emotions on Decision-making Processes*

Mediation tests showed that emotions had a significant effect on perceived relative search effort and decision satisfaction, but it was not yet known which emotions caused the significant effects, nor in which direction. Beta weights could not be interpreted due to

**Table 20: Study 2 Emotional Response Means Across Scenarios**

| Scenario | Hypothesis (supported) | pride               | appreciation        | pleasant surprise | guilt        | anger               | disappointment      | sadness      |
|----------|------------------------|---------------------|---------------------|-------------------|--------------|---------------------|---------------------|--------------|
| 1        | H2a Y                  | <b><u>4.822</u></b> | 4.560*              | 4.324             | 1.100        | 1.413               | 1.611               | 1.393        |
| 2        | H2b Y                  | 4.700*              | <b><u>4.717</u></b> | 4.600*            | 1.213        | 2.416               | 2.173               | 1.780        |
| 3        | H2c N                  | 3.800*              | <b>4.133</b>        | <u>3.667</u>      | 1.333        | 2.566               | 2.333               | 2.166        |
| 4        | H2d N                  | 3.615*              | 3.923*              | 2.666*            | <u>2.025</u> | 3.384*              | <b>4.346</b>        | 2.269        |
| 5        | H2e Y                  | 2.250               | 2.500               | 1.875             | 1.875        | <b><u>5.625</u></b> | 5.562*              | 3.625        |
| 6        | H2f Y                  | 3.000               | 2.500               | 1.500             | 1.000        | <b>3.250</b>        | <b><u>3.250</u></b> | <u>2.000</u> |

Notes: **bold** indicates the highest absolute mean reported within a scenario, underlined indicates where highest mean was anticipated, \* indicates not significantly different than the highest absolute mean (in **bold**) at  $p < .05$ .

**Table 21: Study 2 Correlations Between Emotions and Decision-making Variables**

|                       | pride        | grateful     | pleasant surprise | guilt <sup>+</sup> | anger         | disappointment | sadness <sup>+</sup> |
|-----------------------|--------------|--------------|-------------------|--------------------|---------------|----------------|----------------------|
| perceived effort      | .076         | .119         | .049              | -.130              | -.016         | -.005          | -.018                |
| decision satisfaction | <b>.256*</b> | <b>.250*</b> | <b>.163*</b>      | <b>-.325*</b>      | <b>-.302*</b> | <b>-.286*</b>  | <b>-.155*</b>        |

\*  $p < .05$ .

collinearity among emotion variables. Instead, simple correlations were examined. The correlation matrix may be found in Table 21.

All relationships between emotions and decision satisfaction were significant in a direction consistent with the desirability of the emotion in question. As has been discussed, this finding suggests that emotions felt prior to or during purchase can have very real effects on subsequent feelings about and evaluations of the purchased product long after the purchase event. It also implies that outcome desirability has a significant main effect on decision satisfaction.

Contrary to previous regression results, none of the perceived relative effort variables were significantly correlated with emotions. In the original regressions, however, the combined set of emotions was shown to significantly affect decision-making effort. Thus, while none of the emotions may have been significant individually, some combination of them was. To explore further the effects of emotions on perceived relative decision-making effort, a series of nested regression tests was conducted. Nested tests determine which variables in a model add significantly to its explanatory power. Emotion variables are removed from the full model one at a time, and an F-statistic representing the significance of removing that variable from the model is calculated. The formula used to calculate the differential effect of each of the missing emotion variables is found in Equation 1 below.

(Equation 1) 
$$[(SSE_R - SSE_C)/(k - g)]/n - (k + 1)$$

where

$SSE_R$  = sum of squared error in the reduced model

$SSE_C$  = sum of squared error in the complete model

$k$  = degrees of freedom in the full model

$g$  = degrees of freedom in the reduced model

$n$  = sample size

Nested results may be found in Table 22. Removing gratefulness, guilt or sadness significantly reduced the predictive power that emotions had on perceived decision-making effort. While none of these emotions was statistically significant in determining perceived effort on its own, three of the seven emotions significantly affected the ability to predict perceived decision-making effort. This finding prompts for future exploration of how emotions work together to influence decision-making behaviour as mixed emotions.

Because the formal hypotheses for this study only considered decision processes and did not extend to outcomes, all hypothesized relationships between target emotions and consumer decision-making extensiveness (H3a-f) were rejected by this analysis.

### ***Effects of Outcome Desirability and Agency Appraisals on Decision-making Processes***

The initial regression results shown in Table 18 suggested that appraisals did not significantly affect decision-making processes. However, they were shown to influence decision satisfaction. To explore further the effects of appraisals on decision-making satisfaction, another series of nested regression tests was conducted (Table 23). This time

**Table 22: Study 2 Nested Regression Results Showing the Significance that each Emotion has on Explaining Relative Decision-making Effort (F-statistics and p-values)**

|                  | pride        | grateful              | pleasant surprise | guilt <sup>+</sup>     | anger         | disappointment | sadness <sup>+</sup>  |
|------------------|--------------|-----------------------|-------------------|------------------------|---------------|----------------|-----------------------|
| perceived effort | .101<br>1.00 | 4.545<br><b>.034*</b> | 3.504<br>.063     | 10.628<br><b>.001*</b> | 3.818<br>.052 | 3.718<br>.055  | 4.997<br><b>.026*</b> |

\* p<.05.

**Table 23: Study 2 Significance Levels of Nested Regression Results Showing the Effects of Outcome Desirability and Agency Appraisals on Decision Satisfaction**

|                              | <b>desirability</b> | <b>agency</b> | <b>interactions</b> |
|------------------------------|---------------------|---------------|---------------------|
| <b>decision satisfaction</b> | .036*               | .491          | .148                |

\* p&lt;.05

**Table 24: Study 2 Correlations Between Appraisals and Decision Satisfaction**

|                              | <b>desirability</b> | <b>desirability<br/>x self</b> | <b>desirability<br/>x other</b> | <b>desirability x<br/>circumstance</b> |
|------------------------------|---------------------|--------------------------------|---------------------------------|--|
| <b>decision satisfaction</b> | .446*               | .210*                          | .082                            | .121                                   |

\* p&lt;.05

more than one variable at a time was removed from the full model and a series of F-statistics representing the significance of removing those sets of variables from the model was calculated. The formula used to calculate the differential effect of the missing variables was the same as that found in Equation 1.

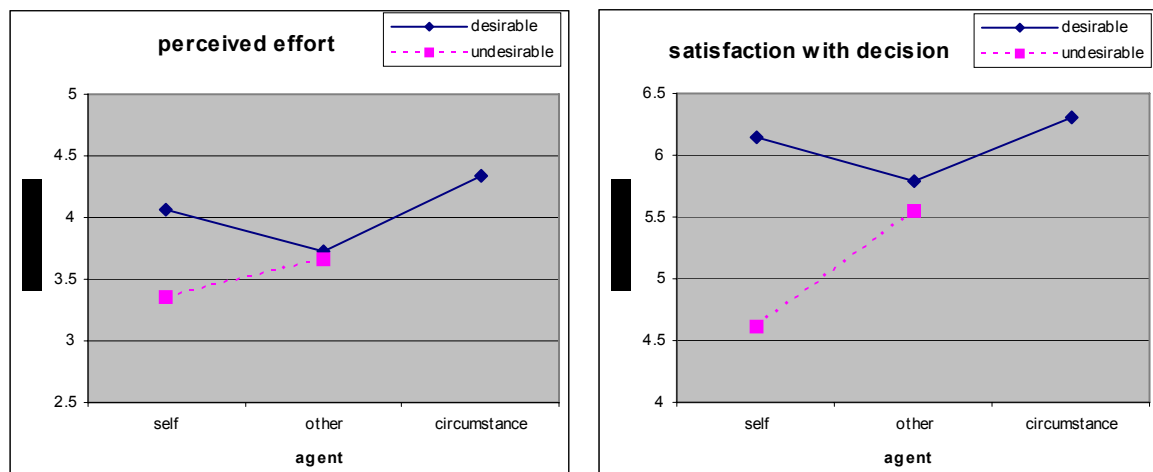
First, the complete appraisal model, including all appraisals main effect and interaction variables, was regressed on the decision satisfaction variable. The associated F and p-values were reported in Table 18. Next, the desirability main effects and interactions were removed from the regression model, leaving only the agency main effect variables. Removing the desirability variables had a significant effect on the predictive ability of the model ( $p=.036$ ). Next, only the desirability main effect was regressed on decision satisfaction in order to determine the significance of removing the agency effects from the model; the result was not significant ( $p=.491$ ). Finally, all interaction effects were removed from the model, leaving only the main effects. Removing interaction terms did not significantly affect the predictive power of the model ( $p=.148$ ).

Simple correlations were used to determine which of the desirability variables (the main effect and its three associated agency interaction terms) significantly influenced decision satisfaction (Table 24). Results revealed a desirability main effect and an interaction effect between desirability and self-caused agency. The significant positive relationship is

consistent with the directions of the correlations between emotions and decision satisfaction reported earlier. The significant interaction should also come as no surprise given that half of the sample population falls in that condition.

Because no hypotheses were formally stated regarding decision satisfaction, no hypotheses were supported with these results. However, it is interesting that decision outcomes were affected by recalled appraisals of and emotional responses to the purchase need and situation. It is likely that memory of specific search processes are blurred over time and subject to high levels of degradation that impair validity, while reported decision outcomes are more overall impressions of the past purchase and more stable memories that would not tend to degrade in the same way.

As was done in study 1, graphs of relevant decision-making process variable means were plotted for each appraisal group in order to determine whether visual directional support of hypotheses and their corresponding interactions were detected, despite lacking statistical evidence. The perceived effort variable was considered along with decision satisfaction because of its significant link to emotion in this study. In study 2, undesirable circumstance conditions could not reasonably be interpreted due to the small number of responses in those cells. Overall, desirability averages were much higher than in study 1. This was fortunate because it made it possible to study potential interaction effects witnessed in study 1 in truly desirable conditions rather than at a neutral point. Figure 6 lends more visual evidence to the existence of a weak interaction effect across self- and other-caused groups that may have surfaced had respondents been more equally distributed across treatment groups, as seen in the patterns in both diagrams. However, once again the two conditions failed to achieve crossover. Study 1 provides a much stronger picture of undesirable events, while study 2 depicts desirable ones more strongly. Between the two studies, directional evidence of weak desirable-undesirable / self-other interactions is depicted.



- Recall that the undesirable circumstance condition (scenario 6) can not be considered because of its small treatment group size (n=2).

**Figure 7: Directional Effects of Appraisals on Dependent Variables across Study 2 Treatment Conditions**

Mimicking the analysis done in study 1, paired contrasts were carried out to test hypotheses regarding decision-making differences across scenarios. Using the visual evidence in Figure 7, only the desirable and undesirable self-caused conditions were compared for all consumer decision-making process measures (H4a). Statistical results uncovered a significant difference in the amount of information search in the desirable and undesirable self-caused conditions, supporting H4a that desirable self-caused events lead to more extensive consumer decision-making processes than will undesirable self-caused events (Table 25).

Only H4a and H6a (that desirable other-caused and circumstance-caused events will lead to similarly extensive consumer decision-making processes where a non-significant result was anticipated) were supported. Thus, the remaining hypotheses regarding directional

**Table 25: Study 2 Significance Levels of T-tests Between Treatment Conditions of Selected Decision-making Variables**

| hypothesis                               | compared scenarios | relative time | amount of search | search pattern | perceived effort | decision satisfaction |
|--|--------------------|---------------|------------------|----------------|------------------|-----------------------|
| <i>desirability differences by agent</i> |                    |               |                  |                |                  |                       |
| H4a                                      | 1,4                | .629          | .034*            | .633           | .126             | .000*                 |

\* p<.05

relationships between appraisal scenarios and consumer decision-making extensiveness (H4b, H4c, H5a, H5b, H6b, H7a and H7b) were rejected. Recall that in study 1, H4b that desirable other-caused will lead to less extensive consumer decision-making process than will undesirable other-caused events was accepted while H4a that desirable self-caused will lead to more extensive consumer decision-making process than will undesirable self-caused events was rejected. The difference may be explained methodologically by the strong undesirable other-caused manipulation and its associated anger response in study 1 and the overwhelming number of respondents in the desirable self-caused condition in study 2.

### Chapter 7: Study 3 Results

During data collection respondents were assigned to one of six scenarios corresponding to the 2 x 3 study design. Each of these groups corresponded to an outcome group (desirable/undesirable) and an agent group (self/other/circumstance). See Table 26 for scenario numbers and their corresponding outcome and agent groups.

Due to alterations in the phone selection matrix, some dependent variables were calculated differently than in study 1. Time spent searching, amount of information searched and search effort (amount of time spent per piece of information searched) were the same as in study 1. Search pattern once again measured whether search was done primarily by brand or by attribute, calculated as a ratio between -1 and 1 with entirely attribute based search scoring -1 and entirely brand based search scoring a 1. Perceived extensiveness was the mean of a four item scale of perceived decision-making extensiveness relative to the average person. Decision satisfaction was a mean score based on a three item scale.

In study 3, two covariate measures showed some effects on dependent variables. They were product category expertise and involvement. A correlation matrix shows that involvement was significantly related to search effort, and expertise was related to decision-making perceptions and satisfaction (Table 27). These covariates will be discussed only where they had significant effects.

**Table 26: Study 3 Scenario Numbers and Their Associated Grouping Variables**

|         |             | Agent  |   |  |
|---------|-------------|--|---|--|
|         |             | self   | other   | circumstance   |
| Outcome | desirable   | <u>Scenario 1</u><br>desirable<br>self-agent<br>n=28   | <u>Scenario 2</u><br>desirable<br>other-agent<br>n=28   | <u>Scenario 3</u><br>desirable<br>circumstance-agent<br>n=28   |
|         | undesirable | <u>Scenario 4</u><br>undesirable<br>self-agent<br>n=27 | <u>Scenario 5</u><br>undesirable<br>other-agent<br>n=27 | <u>Scenario 6</u><br>undesirable<br>circumstance-agent<br>n=28 |

n = 166



**Table 27: Correlations between Covariates and Decision-making Variables**

|             | Time spent | Amount of info | Search effort | Search pattern | Perceived extensiveness | Decision satisfaction |
|-------------|------------|----------------|---------------|----------------|-------------------------|-----------------------|
| Expertise   | .034       | -.017          | .035          | .064           | <b>.203*</b>            | <b>.187*</b>          |
| Involvement | .078       | -.006          | -.025         | <b>.214*</b>   | .128                    | .126                  |

\* p&lt;.05.

***Reliability and Validity Tests***

All multi-item scales achieved Cronbach's alpha measures of above  $\alpha=0.80$  (Table 28), offering no evidence of scale items requiring removal from analysis. Consistent with the first two studies, discriminant validity between emotion variables was checked using principal components analysis with six forced factors and a equamax rotation (Table 29). Measures loaded as anticipated for all but the desirable circumstance-caused emotions of pleasant surprise and delight, which loaded both on their own factor as well as with the desirable other-caused emotion measures of appreciation and gratitude. This result was considered to be acceptable because those two sets of emotions were theorized to have similar effects on decision-making process variables. Thus, results generally confirmed the discriminant validity of the emotion measures and no items were removed from subsequent analysis. All scales were converted into single item mean scores for the remaining analyses.

**Table 28: Study 3 Reliability Tests for Appraisals, Emotions, Decision-making and Covariates**

| Appraisal Scale Items | $\alpha$ level | Emotion Scale items | $\alpha$ level | Covariate Scale Items | $\alpha$ level |
|-----------------------|----------------|---------------------|----------------|-----------------------|----------------|
| Favourable            | .894           | Pride               | .922           | Know – familiar       | .871           |
| Desirable             |                | Pleased with myself |                | Know – knowledge      |                |
| Decision Scale Items  | $\alpha$ level | Appreciation        | .971           | Know – expert         | .872           |
|                       |                | Grateful            |                | Involve – matter      |                |
| Relative time         | .821           | Pleasant surprise   | .934           | Involve - desirable   |                |
| Relative amount       |                | Delight             |                | Involve - useful      |                |
| Relative thorough     |                | Guilty              | .873           | Involve – needed      |                |
| Relative effort       | .831           | Shame               |                | Involve – wanted      |                |
| Satis - confident     |                | Annoyed             | .960           |                       |                |
| Satis – satisfied     |                | Angry               |                |                       |                |
| Satis - wise          |                | Disappointment      | .928           |                       |                |
|                       |                | Sadness             |                |                       |                |

**Table 29: Study 3 Principal Components Factor Loadings to Test for Discriminant Validity**

|                     | Factor Components* |      |      |      |      |      |
|---------------------|--------------------|------|------|------|------|------|
|                     | 1                  | 2    | 3    | 4    | 5    | 6    |
| Proud               | .890               |      |      |      |      |      |
| Pleased with myself | .827               |      |      |      |      |      |
| Appreciation        |                    | .720 |      |      |      |      |
| Grateful            |                    | .749 |      |      |      |      |
| Pleasant surprise   |                    | .534 | .686 |      |      |      |
| Delight             |                    | .581 | .514 |      |      |      |
| Guilty              |                    |      |      | .936 |      |      |
| Shame               |                    |      |      | .841 |      |      |
| Angry               |                    |      |      |      | .682 |      |
| Annoyed             |                    |      |      |      | .656 |      |
| Disappointment      |                    |      |      |      |      | .785 |
| Sadness             |                    |      |      |      |      | .640 |

\* factor scores below .500 suppressed.

### ***Manipulation Checks***

Manipulation checks were performed on the appraisal scenarios just as in study 1 (Table 30). All manipulations were successful; however, interaction effects were apparent in the outcome and self-agent groups. The self-caused agent groups also showed a significant outcome effect due to the high mean response to the desirable other-agent condition. Multiple manipulation effects within single treatments were anticipated in the face of the experiment's relaxed controls. As such, manipulations were deemed successful.

### ***Direct and Indirect Effects of Appraisals on Decision-making Processes***

Another step-down MANOVA analysis was used to determine whether emotions mediated the relationship between appraisal and decision-making (Table 31). As in study 1, step 1 compared all emotion and decision-making variables across appraisal groups. The emotions then were removed as dependent variables and used as covariates in the model. In the third step, emotions and decision-making variables were switched so that emotions were the dependent variables and the decision-making variables acted as the covariates. The significant agency and outcome effects that were evident in the first model disappeared when emotions were removed to act as covariates, but reappeared in the third model when decision-making variables acted as covariates.

**Table 30: Study 3 Manipulation Checks of the Differences in Cognitive Appraisals Across Experimental Conditions**

| Outcome (Desirability) |                 |  |         |     |         |         |       |
|------------------------|-----------------|--|---------|-----|---------|---------|-------|
|                        |                 |  | Means   |     | Agent   |         |       |
|                        |                 |  | Outcome |     | 1       | 2       | 3     |
|                        |                 |  | 1       |     | 5.607   | 6.071   | 5.446 |
|                        |                 |  | 2       |     | 2.518   | 1.796   | 3.071 |
|                        |                 |  | SS      | df  | MS      | F       | Sig.  |
| Main Effects           | Agent           |  | 2.827   | 2   | 1.413   | .857    | .426  |
|                        | Outcome         |  | 435.799 | 1   | 435.799 | 264.188 | .000  |
| Interaction            | Agent x Outcome |  | 25.518  | 2   | 12.759  | 7.735   | .001  |
| Model                  |                 |  | 463.615 | 5   | 92.723  | 56.210  | .000  |
| Residual               |                 |  | 263.933 | 160 | 1.650   |         |       |
| Total                  |                 |  | 727.548 | 165 | 4.409   |         |       |

| Self-Caused (Agent) |                 |  |         |     |        |        |       |
|---------------------|-----------------|--|---------|-----|--------|--------|-------|
|                     |                 |  | Means   |     | Agent  |        |       |
|                     |                 |  | Outcome |     | 1      | 2      | 3     |
|                     |                 |  | 1       |     | 4.928  | 4.357  | 2.142 |
|                     |                 |  | 2       |     | 4.629  | 2.111  | 2.571 |
|                     |                 |  | SS      | df  | MS     | F      | Sig.  |
| Main Effects        | Agent           |  | 165.741 | 2   | 82.870 | 34.936 | .000  |
|                     | Outcome         |  | 20.244  | 1   | 20.244 | 8.534  | .004  |
| Interaction         | Agent x Outcome |  | 52.897  | 2   | 26.448 | 11.150 | .000  |
| Model               |                 |  | 239.670 | 5   | 47.934 | 20.208 | .000  |
| Residual            |                 |  | 379.534 | 160 | 2.372  |        |       |
| Total               |                 |  | 619.205 | 165 | 3.753  |        |       |

| Other-Caused (Agent) |                 |  |         |     |        |        |       |
|----------------------|-----------------|--|---------|-----|--------|--------|-------|
|                      |                 |  | Means   |     | Agent  |        |       |
|                      |                 |  | Outcome |     | 1      | 2      | 3     |
|                      |                 |  | 1       |     | 3.428  | 4.185  | 3.107 |
|                      |                 |  | 2       |     | 3.074  | 6.037  | 3.107 |
|                      |                 |  | SS      | df  | MS     | F      | Sig.  |
| Main Effects         | Agent           |  | 135.776 | 2   | 67.888 | 24.695 | .000  |
|                      | Outcome         |  | 9.822   | 1   | 9.822  | 3.573  | .061  |
| Interaction          | Agent x Outcome |  | 38.202  | 2   | 19.101 | 6.948  | .001  |
| Model                |                 |  | 184.073 | 5   | 36.815 | 13.392 | .000  |
| Residual             |                 |  | 437.103 | 159 | 2.749  |        |       |
| Total                |                 |  | 621.176 | 164 | 3.788  |        |       |

| Circumstance-Caused (Agent) |                 |  |         |     |        |        |       |
|-----------------------------|-----------------|--|---------|-----|--------|--------|-------|
|                             |                 |  | Means   |     | Agent  |        |       |
|                             |                 |  | Outcome |     | 1      | 2      | 3     |
|                             |                 |  | 1       |     | 2.892  | 3.178  | 5.000 |
|                             |                 |  | 2       |     | 3.074  | 2.769  | 4.035 |
|                             |                 |  | SS      | df  | MS     | F      | Sig.  |
| Main Effects                | Agent           |  | 87.917  | 2   | 43.958 | 12.432 | .000  |
|                             | Outcome         |  | 6.626   | 1   | 6.626  | 1.874  | .173  |
| Interaction                 | Agent x Outcome |  | 9.102   | 2   | 4.551  | 1.287  | .279  |
| Model                       |                 |  | 103.031 | 5   | 20.606 | 5.828  | .000  |
| Residual                    |                 |  | 562.217 | 159 | 3.536  |        |       |
| Total                       |                 |  | 665.248 | 164 | 4.056  |        |       |

**Table 31: Study 3 Step-down Analysis MANOVA Results (p-values for multivariate F-tests)**

| Effect                    | Step 1<br>Dependent<br>variables: E & D<br>Covariates: none | Step 2<br>Dependent<br>variables: D<br>Covariates: E | Step 3<br>Dependent<br>variables: E<br>Covariates: D |
|---------------------------|---|--|--|
| Hypothesis<br>(supported) |   | H1a<br>N   | H1b<br>Y   |
| Outcome                   | .000  | .660   | .000   |
| Agent                     | .000  | .497   | .000   |
| Outcome x Agent           | .000  | .573   | .000   |

Univariate F-tests indicated that the significant effects in the first model (step 1) were driven primarily by appraisals' significant effects on emotions. All outcome main effects on emotions were significant ( $p < .05$ ). Interactions showed significant relationships ( $p < .05$ ) with all emotions except disappointment and sadness. Univariate agency effects were only significant for the emotions of pride ( $p = .000$ ), guilt ( $p = .002$ ) and anger ( $p = .025$ ). Appraisals had no significant effects on decision-making variables.

No significant univariate F relationships were found in the second model (step 2), although search pattern had a significant covariate effect ( $F = 2.725$ ,  $p = .012$ ) on pride ( $t = 3.764$ ,  $p < .001$ ). While beta weights for emotions were spurious due to collinearity, the beta weight for pride was positive and thus inconsistent with the hypothesized effect because searching by brand is considered to be a heuristic for simplifying decision-making.

The third univariate F analysis (step 3) uncovered results that mimicked those in step 1. Once again, all emotions were significantly affected by outcome ( $p < .001$ ). Significant interactions once again stemmed from all of the measured emotions except disappointment and sadness ( $p < .001$ ). Agency again influenced pride ( $p < .001$ ), guilt ( $p = .002$ ) and anger ( $p = .012$ ) and analysis again uncovered the significant covariate effect that pride ( $F = 2.759$ ,  $p = .021$ ) had on search pattern ( $t = 2.741$ ,  $p = .007$ ).

In sum, these analyses offered evidence that appraisals influence emotions and emotions influence decision-making processes, thus supporting the mediating role of emotions between

appraisals and decision-making (H1b). Because appraisals had no direct effects on decision-making variables, H1a was not supported.

### *Effects of Outcome Desirability and Agency Appraisals on Emotions*

It was hoped that study 3 would help to clarify mixed findings regarding the effects of appraisals on dominant emotions. While mixed emotions were once again evident, five of the six hypotheses were supported with respect to anticipated dominant emotions across conditions (Table 32). The anticipated dominant emotion was statistically significant in five out of six scenarios, but was not always significantly stronger than all other target emotions. Thus, H2a predicting pride in response desirable self-caused events, H2b predicting appreciation in response desirable other-caused events, H2c predicting pleasant surprise in response desirable circumstance-caused events, H2e predicting anger in response undesirable other-caused events and H2f predicting disappointment and sadness in response undesirable circumstance-caused events were supported. Because guilt was not dominant in the undesirable self-caused condition, H2d was again rejected.

Further examination of results emphasized the effects that outcome and agency appraisals have on emotions. In scenario 1, pride was not significantly higher than the other desirable emotions, indicating an outcome desirability main effect only. Further to the principal

**Table 32: Study 3 Emotional Responses Across Scenarios**

| Scenario | Hypothesis (supported) | pride        | appreciation | pleasant surprise | guilt        | anger        | disappointment | sadness        |
|----------|------------------------|--------------|--------------|-------------------|--------------|--------------|----------------|----------------|
| 1        | H2a Y                  | <u>5.732</u> | 5.517*       | 5.464*            | 1.303        | 1.303        | 1.285          | 1.214          |
| 2        | H2b Y                  | 3.703        | <u>6.428</u> | 6.232*            | 2.303        | 1.446        | 1.571          | 1.607          |
| 3        | H2c Y                  | 4.428        | 5.642*       | <u>5.759</u>      | 1.642        | 1.678        | 1.750          | 1.678          |
| 4        | H2d N                  | 2.096        | 3.442        | 3.019             | <u>4.759</u> | <u>5.423</u> | 5.259*         | 5.074*         |
| 5        | H2e Y                  | 1.461        | 1.400        | 1.538             | 2.961        | <u>6.461</u> | 5.769*         | 5.538          |
| 6        | H2f Y                  | 2.553        | 2.555        | 2.166             | 2.196        | 4.660*       | <u>5.000</u>   | <u>4.571</u> * |

Notes: **bold** indicates the highest emotion measure within a scenario, underlined indicates where the highest mean was anticipated, \* shows emotions reported within a scenario that are not significantly different to the highest mean (in **bold**).

components analysis and consistent with the previously reported outcome by agency interaction effect, emotions associated with other- and circumstance-caused appraisals were not significantly different in their respective desirable and undesirable scenarios (2 and 3, and 5 and 6, respectively).

### ***The Effects of Emotions on Decision-making Processes***

Based on the MANOVA conducted earlier, evidence of a relationship between pride and search pattern was anticipated to emerge from these analyses. A correlation matrix was used to verify the significant relationship between pride and search pattern (Table 33). The relationship was directionally opposite to that hypothesized, therefore hypothesis H3a that increased pride leads to increased consumer decision-making extensiveness was not supported.<sup>16</sup> This result is consistent with findings in Study 1 and warrants further consideration. No other significant relationships were found between emotions and consumer decision-making extensiveness variables, leading to the rejection of H3b, H3c, H3d, H3e and H3f.

While no hypotheses were stated regarding decision satisfaction, it showed significant negative correlations with the four negative emotions, indicating a possible outcome

**Table 33: Study 3 Correlations Between Emotion and Decision-making Variables**

|                       | pride        | appreciation | pleasant surprise | guilt         | anger         | disappointment | sadness       |
|-----------------------|--------------|--------------|-------------------|---------------|---------------|----------------|---------------|
| Search pattern        | <b>.254*</b> | .087         | .087              | -.036         | -.058         | -.081          | -.026         |
| Decision satisfaction | .102         | .125         | .141              | <b>-.164*</b> | <b>-.193*</b> | <b>-.208*</b>  | <b>-.168*</b> |

\* p<.05.

<sup>16</sup> In this case, search was conducted primarily by attribute and its associated search pattern mean was negative. As such positive relationships indicate less search by attribute. Less search by attribute corresponds with either less overall search or more search by brand (a search heuristic), both of which indicate less extensive decision-making).

**Table 34: Study 3 ANOVA Results for Effects of Appraisals on Decision-making (continued on next page)**

| Time Spent   |                 | SS        | df  | MS        | F    | Sig. |
|--------------|-----------------|-----------|-----|-----------|------|------|
| Main Effects | Agent           | 5723.893  | 2   | 2861.946  | .167 | .846 |
|              | Outcome         | 9351.365  | 1   | 9351.365  | .546 | .461 |
| Interaction  | Agent x Outcome | 9002.509  | 2   | 4501.255  | .263 | .769 |
| Model        |                 | 23954.351 | 5   | 4790.870  | .280 | .924 |
| Residual     |                 | 2689599.3 | 157 | 17131.206 |      |      |
| Total        |                 | 2713553.6 | 162 | 16750.331 |      |      |

| Amount of Search |                 | SS        | df  | MS      | F    | Sig. |
|------------------|-----------------|-----------|-----|---------|------|------|
| Main Effects     | Agent           | 71.996    | 2   | 35.998  | .084 | .919 |
|                  | Outcome         | 5.006     | 1   | 5.006   | .012 | .914 |
| Interaction      | Agent x Outcome | 239.799   | 2   | 119.900 | .281 | .756 |
| Model            |                 | 316.575   | 5   | 63.315  | .148 | .980 |
| Residual         |                 | 67042.222 | 157 | 427.021 |      |      |
| Total            |                 | 67358.798 | 162 | 415.795 |      |      |

| Search Effort |                 | SS       | df  | MS      | F     | Sig.         |
|---------------|-----------------|----------|-----|---------|-------|--------------|
| Covariate     | Involvement     | 452.228  | 1   | 452.228 | 6.749 | <b>.010*</b> |
| Main Effects  | Agent           | 146.602  | 2   | 73.301  | 1.094 | .338         |
|               | Outcome         | 2.742    | 1   | 2.742   | .041  | .840         |
| Interaction   | Agent x Outcome | 66.828   | 2   | 33.414  | .499  | .608         |
| Model         |                 | 666.256  | 6   | 111.043 | 1.657 | .136         |
| Residual      |                 | 9180.038 | 137 | 67.008  |       |              |
| Total         |                 | 9846.294 | 143 | 68.855  |       |              |

| Search Pattern |                 | SS     | df  | MS   | F     | Sig. |
|----------------|-----------------|--------|-----|------|-------|------|
| Main Effects   | Agent           | .895   | 2   | .448 | 1.279 | .281 |
|                | Outcome         | .467   | 1   | .467 | 1.335 | .250 |
| Interaction    | Agent x Outcome | .109   | 2   | .054 | .156  | .856 |
| Model          |                 | 1.428  | 5   | .286 | .816  | .540 |
| Residual       |                 | 48.994 | 140 | .350 |       |      |
| Total          |                 | 50.422 | 145 | .348 |       |      |

| Perceived Decision Process |                 | SS      | df  | MS    | F     | Sig.         |
|----------------------------|-----------------|---------|-----|-------|-------|--------------|
| Covariate                  | Expertise       | 8.575   | 1   | 8.575 | 6.845 | <b>.010*</b> |
| Main Effects               | Agent           | 2.646   | 2   | 1.323 | 1.056 | .350         |
|                            | Outcome         | .119    | 1   | .119  | .095  | .758         |
| Interaction                | Agent x Outcome | 2.811   | 2   | 1.406 | 1.122 | .328         |
| Model                      |                 | 14.170  | 6   | 2.362 | 1.885 | .087         |
| Residual                   |                 | 194.189 | 155 | 1.253 |       |              |
| Total                      |                 | 208.358 | 161 | 1.294 |       |              |

\*p&lt;.05

| Decision Satisfaction |                 | SS      | df  | MS    | F     | Sig.         |
|-----------------------|-----------------|---------|-----|-------|-------|--------------|
| Covariate             | Expertise       | 4.610   | 1   | 4.610 | 5.862 | <b>.017*</b> |
| Main Effects          | Agent           | .255    | 2   | .128  | .162  | .850         |
|                       | Outcome         | 3.637   | 1   | 3.637 | 4.625 | <b>.033*</b> |
| Interaction           | Agent x Outcome | .027    | 2   | .013  | .017  | .983         |
| Model                 |                 | 8.530   | 6   | 1.422 | 1.808 | .101         |
| Residual              |                 | 123.467 | 157 | .786  |       |              |
| Total                 |                 | 131.997 | 163 | .810  |       |              |

\*p<.05

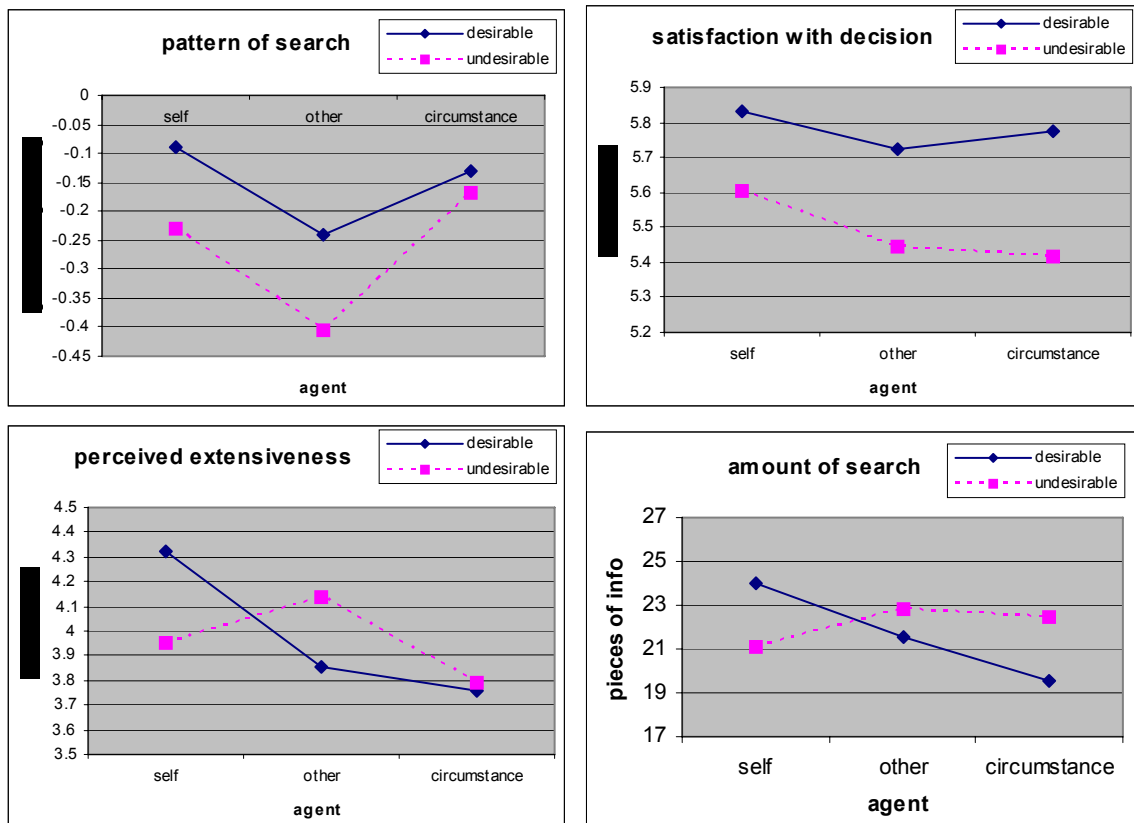
desirability main effect on decision satisfaction. Findings showed that negative emotions felt with respect to the reason for making a purchase reduce the level of satisfaction with the decision itself.

### ***Effects of Outcome Desirability and Agency Appraisals on Decision-making Processes***

At this point, no significant direct effects were anticipated between appraisals and decision-making processes. In order to confirm this expectation, ANOVA tests for the two appraisal variables were run on each dependent variable, including any relevant covariates (Table 34). Results confirmed the covariate effects of product category expertise and involvement already identified, as well as confirming that outcome desirability had a significant effect on decision satisfaction. A set of paired comparisons confirmed the lack of significant differences. Because no significant effects were found in any of the directional hypotheses predicting the comparative effects of appraisal combinations of consumer decision-making extensiveness across experimental conditions, only H6a (where no significant result was expected) was supported. All of H4a, H4b, H4c, H5a, H5b, H6b, H7a, and H7b were rejected.

Visual inspection of results was again conducted on relevant decision-making variables (Figure 8). Variables that were significant in any of the three studies were examined. Search pattern and decision satisfaction showed outcome desirability main effects in which desirable purchase situations led to more decision-making extensiveness than undesirable purchase situations. There was some evidence of an agency main effect associated with search pattern, where self-caused situations led to less attribute-based search than other-caused conditions.





**Figure 8: Directional Effects of Appraisals on Dependent Variables Across Study 3 Treatment Conditions**

The amount of information searched and the perceived extensiveness of search bore more visual resemblance to the hypothesized relationships. Desirable and undesirable results were visually consistent with those anticipated for both the self- and other-caused agency groups, showing some directional evidence of theorized relationships. These two pictures suggest that the proposed theory may have promise, but that more study is necessary. A summary of proposed hypotheses and their corresponding results across all three studies may be found in Table 35.

**Table 35: Summary of Support for Hypotheses Across Studies 1-3.**

|   |                     |     |  | <i>Supported</i> |           |           |
|---|---------------------|-----|--|------------------|-----------|-----------|
| <i>Overall Effects</i>                          |                     |     |  | <i>S1</i>        | <i>S2</i> | <i>S3</i> |
| <i>Direct</i>                                   | <i>appraisals</i>   | H1a | Outcome desirability and agency will influence consumer decision-making processes directly.  | N                | N         | N         |
| <i>Indirect (mediation)</i>                     | <i>emotions</i>     | H1b | The influences of outcome desirability and agency on consumer decision-making processes will be mediated by emotions.  | Y                | Y         | Y         |
| <i>Effects of Appraisals on Emotions</i>        |                     |     |  | <i>Y</i>         | <i>Y</i>  | <i>Y</i>  |
| <i>Desirable</i>                                | <i>Self</i>         | H2a | Desirable self-caused events will lead to greater experienced feelings of pride than feelings of appreciation, pleasant surprise, guilt, anger, disappointment or sadness.             | N                | Y         | Y         |
|   | <i>Other</i>        | H2b | Desirable other-caused events will lead to greater experienced feelings of appreciation than feelings of pride, pleasant surprise, guilt, anger, disappointment or sadness.            | N                | Y         | Y         |
|   | <i>Circumstance</i> | H2c | Desirable circumstance-caused events will lead to greater experienced feelings of pleasant surprise than feelings of pride, appreciation, guilt, anger, disappointment or sadness.     | Y                | N         | Y         |
| <i>Undesirable</i>                              | <i>Self</i>         | H2d | Undesirable self-caused events will lead to greater experienced feelings of guilt than feelings of pride, appreciation, pleasant surprise, anger, disappointment or sadness.           | N                | N         | N         |
|   | <i>Other</i>        | H2e | Undesirable other-caused events will lead to greater experienced feelings of anger than feelings of pride, appreciation, pleasant surprise, guilt, disappointment or sadness.          | Y                | Y         | Y         |
|   | <i>Circumstance</i> | H2f | Undesirable circumstance-caused events will lead to greater experienced feelings of disappointment or sadness than feelings of pride, appreciation, pleasant surprise, guilt or anger. | Y                | Y         | Y         |
| <i>Effects of Emotions on Decision-making</i>   |                     |     |  | <i>Y</i>         | <i>Y</i>  | <i>Y</i>  |
| <i>Pride</i>                                    |                     | H3a | Increased experienced feelings of pride will lead to more extensive consumer decision-making processes.  | N                | N         | N         |
| <i>Appreciation/</i>                            |                     | H3b | Increased experienced feelings of appreciation will lead to less extensive consumer decision-making processes.   | N                | N         | N         |
| <i>Gratitude</i>                                |                     | H3c | Increased experienced feelings of pleasant surprise will lead to less extensive consumer decision-making processes.  | N                | N         | N         |
| <i>Pleasant</i>                                 |                     | H3d | Increased experienced feelings of guilt will lead to less extensive consumer decision-making processes.  | N                | N         | N         |
| <i>Surprise</i>                                 |                     | H3e | Increased experienced feelings of anger will lead to more extensive consumer decision-making processes.  | N                | N         | N         |
| <i>Guilt</i>                                    |                     | H3f | Increased experienced feelings of disappointment or sadness will lead to moderately extensive consumer decision-making processes.  | N                | N         | N         |
| <i>Anger</i>                                    |                     |     |  |                  |           |           |
| <i>Disappointment / Sadness</i>                 |                     |     |  |                  |           |           |
| <i>Effects of Appraisals on Decision-making</i> |                     |     |  | <i>N</i>         | <i>N</i>  | <i>N</i>  |
| <i>Desirable/ Undesirable</i>                   | <i>Self</i>         | H4a | Desirable self-caused events will lead to more extensive consumer decision-making processes than will undesirable self-caused events.  | N                | Y         | N         |
|   | <i>Other</i>        | H4b | Desirable other-caused events will lead to less extensive consumer decision-making processes than will undesirable other-caused events.  | Y                | N         | N         |
|   | <i>Circumstance</i> | H4c | Desirable circumstance-caused events will lead to less extensive consumer decision-making processes than will undesirable circumstance-caused events.                                  | N                | N         | N         |
| <i>Self/Other</i>                               | <i>Desirable</i>    | H5a | Desirable self-caused events will lead to more extensive consumer decision-making processes than will desirable other-caused events.   | N                | N         | N         |
|   | <i>Undesirable</i>  | H5b | Undesirable self-caused events will lead to less extensive consumer decision-making processes than will undesirable other-caused events.   | N                | N         | N         |
| <i>Other/ Circumstance</i>                      | <i>Desirable</i>    | H6a | Desirable other-caused and circumstance-caused events will lead to similarly extensive decision-making processes.  | Y                | Y         | Y         |
|   | <i>Undesirable</i>  | H6b | Undesirable other-caused events will lead to more extensive consumer decision-making processes than will undesirable circumstance-caused events.                                       | N                | N         | N         |
| <i>Self/ Circumstance</i>                       | <i>Desirable</i>    | H7a | Desirable self-caused events will lead to more extensive consumer decision-making processes than will desirable circumstance-caused events.  | N                | N         | N         |
|   | <i>Undesirable</i>  | H7b | Undesirable self-caused events will lead to less extensive consumer decision-making processes than will undesirable circumstance-caused events.  | N                | N         | N         |

## **Chapter 8: Discussion**

### **Introduction**

Until recently, it was believed that the valence of emotions solely determined their influences on consumer decision-making processes; negative emotions led to more extensive decision-making processes and positive emotions led to less extensive decision-making processes. This research was conducted to attempt to answer two questions. The first asked to what extent cognitive appraisals directly affected consumer decision-making processes as opposed to being mediated by emotions. The second asked whether agency appraisals can help to offer a more complete explanation of how emotions influence consumer decision-making processes. In answering these questions, the research was intended to explain contradictory findings in the literature regarding the effects of emotions on consumer decision-making.

### **Findings**

Evidence from the three studies uncovered some generally consistent findings. A summary table of supported hypotheses may be found in Table 35. First, emotions appear to mediate the relationship between appraisals and decision-making extensiveness. Second, outcome desirability and agency appraisals combine to elicit all but one of the dominant emotions specified by the hypotheses. While emotions had some limited success in determining decision-making extensiveness, very little overall support was found regarding the effects that appraisals and emotions have on consumer decision-making processes. As such, evidence of the mediating effect of emotion was not clearly substantiated and should be interpreted cautiously.

Study 1 findings demonstrated that emotions mediate the relationship between appraisals and consumer decision-making processes. Mixed evidence was uncovered regarding the dominant emotions experienced in relation to appraisal interaction conditions. Emotions that were predicted to dominate in each of the six treatment conditions in fact only dominated in

three of the six cases, and in those cases there were other emotions that were equally strong. The influences that emotions have on consumer decision-making processes were not significant. The only significant effect of appraisals on decision-making was found between desirable and undesirable other-caused conditions, with desirable other-caused events leading to less extensive decision-making processes. Weak manipulations may have been the cause of the large number of insignificant results. A replication with stronger manipulations was carried out as study 3 to draw more certain conclusions regarding the observed effects in this study. Study 2 also provided an opportunity to reconsider these hypotheses in a more natural quasi-experimental setting.

Study 2 offered further evidence of the mediated relationship between appraisals and consumer decision-making processes. It also provided more support for the effects of appraisals on emotions. In this study, the predicted dominant emotions were supported in four of the six conditions. Only pleasant surprise and guilt were not the strongest emotions in their anticipated situations. These findings resulted from a more realistic experimental design, thus should be more true to life than the results of study 1. However, despite the realism of this study, emotions still did not demonstrate any significant effects on decision-making processes. In this study, a significant difference was found in the level of decision-making extensiveness used in desirable and undesirable self-caused conditions, but not in other-caused conditions. This result may be explained by the large number of self-caused purchases reported and the correspondingly small number of other-caused purchase situations. Again, overall study results were weak with respect to effects on consumer decision-making variables. Because studies 1 and 2 both demonstrated their own limitations, study 3 was designed to try to reduce these problems.

In both Studies 1 and 2 there was visual evidence of interaction effects in the self/other, desirable/undesirable conditions. In study 1, manipulations produced quite negative results and were far stronger in the other-caused condition than the self-caused condition, so while

interactions occurred, they did not fully cross in the weaker condition. In study 2 the opposite was true, with desirable and self-related conditions being more commonly evidenced. When this evidence is combined, there is strong reason to believe that a study that is equally strong across all conditions may achieve the hypothesized crossover effects. Thus, study 3 was designed to learn from the lessons of study 1 and study 2 with the hope of shedding light on mixed findings.

Study 3 helped to clarify inconsistent findings from the first two studies by eliminating some of the methodological difficulties encountered in the two previous designs. Findings helped to clarify which results from the first two studies were replicable once methodological deficiencies were removed. Study 3 again supported the mediating role of emotions in the relationship between cognitive appraisals and consumer decision-making processes. In study 3 strong evidence of the effects of appraisals on emotions was confirmed. Five of the six scenarios elicited the predicted dominant emotions. This supported previous both sets of previous findings with respect to the effects of appraisals on negative emotions and helped to clarify mixed findings with respect to positive emotions. Thus only the hypothesis regarding undesirable self-caused conditions eliciting guilt was rejected. Study 3 did not uncover any statistically significant evidence of appraisals or emotions significantly affecting consumer decision-making processes. Thus, these hypotheses were in no way supported by this research.

No statistically significant evidence was uncovered to support the proposed interaction effects that outcome desirability and agency have on consumer decision-making processes. Reasons for these results may be contextual, methodological or theoretical and will be addressed in the limitations section of this chapter. Some directional visual evidence suggests that the theory may still be worth pursuing, perhaps in different purchase contexts or product categories where the effects of emotions may be stronger.

In response to the study's research questions, emotions were shown to entirely mediate the relationship between cognitive appraisals and consumer decision-making processes. Cognitively driven appraisals did not influence consumer decision-making processes directly; instead those appraisals combined to elicit specific emotions, which in turn influenced subsequent decision-making responses. Both outcome desirability and agency had consistently significant main effects on emotions; thus agency was pertinent to shaping how individual positive and negative emotions influenced behaviour.

While there was evidence in all studies that emotions influenced consumer decision-making processes, they were not always as hypothesized. Study 2 offered the only statistical evidence to suggest that outcome desirability and agency appraisal can interact to contradict previous assertions about the effects of emotions on decision-making processes. In this case, self-caused agency appraisals combined with desirable appraisals to cause pride, which in turn led to more extensive decision-making processes than self-caused undesirable (negative) emotions (study2). In other analyses, the main effect of outcome desirability was found without a correspondingly significant agency effect (study 3). In still other cases, agency effects were supported where they were anticipated to have the same effects on behavioural responses as outcome desirability (study 1). However, graphical evidence in all three studies showed the presence of weak interaction effects between agency and outcome desirability on consumer decision-making processes. While little support exists to support the effect of agency on consumer decision-making processes, enough was uncovered to warrant further exploration.

## **Contributions**

Marketing theory has been advanced by this research in one key way. Agency appraisals have been shown to affect emotions in consumer decision making situations. In particular, this study was the first to demonstrate in a comprehensive way the influence that agency appraisals have in causing emotions. In general, past studies had respondents recall a time

when they experienced a particular emotion and then reconstruct their appraisals of the situation that caused the emotion (Ruth, Brunel and Otnes, 2002; Smith and Ellsworth, 1985). The one other study that manipulated cognitive appraisals and had people report on emotional responses did not definitively find that agency appraisals elicited consistent emotional responses (Roseman, 1991). Confirmation that agency appraisals underlie emotions provides direction for a new theoretical foundation for research into consumer emotions and their effects on subsequent consumer behaviours. For example, agency-related emotions may serve to expand the study of customer service failures from considering the effects of negative emotions on successful service failure recovery to considering the effects of appraised service failure causes on successful recovery. The opportunity to better understand how consumers' emotions influence their behaviour will benefit both marketing theorists and practitioners when developing future research avenues and marketing programs, respectively.

The most consistent findings in this study did not relate to consumer decision-making processes, but consumer satisfaction with decision outcomes. Emotions had a statistically significant effect on decision satisfaction, thus mediating the relationship between appraisals and decision satisfaction. While only main effects were uncovered, it is useful to note that appraisal manipulations had a stronger effect after a choice was made than during the election process. These findings lend support to the notion that incidental emotional responses can have just as significant an influence on subsequent consumer decision-making behaviour as emotions integral to the task at hand. This finding can help marketing practitioners to better understand the extent to which emotions are relevant in consumer decision-making and product evaluation, allowing them to better meet these subtle but salient emotional needs when providing customer service.

This study did not succeed in its third objective to explain contradictory findings in the current literature. However, the theory that was proposed for that purpose has not yet been entirely disproved. Visual evidence suggests that a different research context or design may

be enough to demonstrate the small but critical effect that agency appraisals have on behaviour stemming from their associated emotional responses. More study is needed to test contextual boundaries and overcome potential methodological barriers before the theory is entirely discarded.

### **Limitations**

Several limitations are recognized in relation to this research. First, there is the possibility of incorrect theory construction. Emotion theory is contradictory by nature. As evidenced in the hypotheses chapter, for every theory about how an emotion influences behaviour, there is another theory to argue why it causes an opposing behaviour. As such, the theory presented in this paper may be based on inappropriate theories or it may combine findings that work under different boundary conditions. Circumstance related research is scarce, making those propositions largely supposition, based on anecdotal evidence and analogy.

Second, several methodological issues are evident. Because the agency appraisal effect under investigation was small, a 5% effect size versus the 88% main effect of outcome desirability, it would be difficult to detect in the face of a strong outcome desirability effect. It is difficult to stimulate emotional responses in experimental setting; manipulations may not have been strong enough to demonstrate the theorized effect.

Finally, the purchase context in this study was limited to emotionally relevant high involvement search products. While it was believed that the replacement of emotionally involving search products would be an appropriate research context, the chosen products may use too much cognitive effort to be significantly influenced by emotions. The significant effects that product category expertise and involvement had in study 3 provide evidence of cognitive decision-making influences. Other product categories and purchase contexts where these covariates play less of a role may provide more suitable contexts in which to demonstrate support for this theory.



An unanticipated issue arose with the highly mixed emotions witnessed in this study.

While some level of mixed emotion was expected, they were not expected to occur to such a great extent. For example, during pre-testing for study 3, receiving an award for hard work led to feelings of gratitude, receiving a generous gift from a friend led to feelings of guilt, and losing a friend's mobile phone led to feelings of anger. Attempts to generate an emotionally neutral vignette failed. Respondent sensitivity to appraisal cues had serious effects on subsequent emotions, often leading to mixed emotional responses. The prevalence of this phenomenon was not recognized at the outset of this research and warrants further attention.

### **Directions for Future Research**

More study is needed to uncover possible merits in this theory. New contexts and methods should be used to further explore this explanation of contradictory findings regarding how emotions influence consumer decision-making extensiveness. Impulse purchases and credence products may provide more appropriate venues for witnessing interaction effects between outcome desirability and agency appraisals by removing product category expertise and involvement issues. Measuring these effects in a field setting may help remove issues with effect size and manipulation strength; service settings may provide such an opportunity.

Mixed emotions are also worthy of more attention. All three studies uncovered considerable levels of mixed emotions. Because incidental past emotions provided the context for this study, the effects of anticipatory emotions were not considered. They may help to explain some of the mixed emotional responses witnessed throughout this research. As such, a wider range of appraisal combinations and their related emotional responses should be carried out.

While consumer decision-making processes were the focus of this research, the influence of cognitive appraisals on emotions may be extended to explain other elements of consumer behaviour. Some evidence of its wider application was found when appraisals were shown to affect a consumer's satisfaction with a chosen decision. Other applications may have to do

with the relationship between emotions and sensory attributes in information search, emotional responses to atmospherics, product usage and disposal, to name a few.

## **Conclusions**

This study served to establish the effects of outcome desirability and agency appraisals on emotions. This study manipulated these appraisals to determine the effects that they would have on emotions rather manipulating emotions and asking people to indicate their associated appraisals. Results indicated that appraisals influence emotions and that any relationship that appraisals have with consumers' purchase decision-making processes is mediated by those emotions. However, the relationships between appraisal, emotions, and consumer decision-making extensiveness were not strong enough to be significant. While the results of this study were inconclusive, there is still considerable room to explore the effects that cognitive appraisals have on consumer decision-making processes and other consumer behaviours such as response to store atmospherics, product usage and disposal, and customer satisfaction.

## References

- Averill, James R. and Thomas A. More (1993) "Happiness", in Michael Lewis and Jeanette M. Haviland (Eds.), *Handbook of Emotions*, New York, NY: Guilford Press, 617-629.
- Bagozzi, Richard P., Mahesh Gopinath and Prashanth U. Nyer (1999) "The Role of Emotions in Marketing", *Journal of the Academy of Marketing Science*, 27 (2), 184-206.
- Batra, Rajeev and Morris B. Holbrook (1990) "Developing a Typology of Affective Responses to Advertising: A test of validity and reliability", *Psychology and Marketing*, 7, 11-25.
- Batra, Rajeev and M.L. Ray (1986) "Affective Responses Mediating Acceptance of Advertising", *Journal of Consumer Research*, 13, 234-249.
- Baron, J. (1993) "Heuristics and Biases in Equity Judgements: A Utilitarian Approach", In B. Mellers and J. Baron (Eds.), *Psychological Perspectives on Justice*, Cambridge, MA: Cambridge University Press, 109-137.
- Baron, Reuben M. and David A. Kenny (1986) "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations", *Journal of Personality and Social Psychology*, 51 (6), 1173-1182.
- Baumeister, Roy F., Arlene M. Stillwell and Todd F. Heatherton (1994) "Guilt: An Interpersonal Approach", *Psychological Bulletin*, 115 (2), 243-267.
- Bitner, Mary Jo (1990) "Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses", *Journal of Marketing*, 54 (April), 69-82.
- Broniarczyk, S., W. Hoyer, and L. McAlister (1998) "Consumers' Perceptions of the Assortment Offered in a Grocery Category: The Impact of Item Reduction," *Journal of Marketing Research*, 35 (May), 166-176.
- Braun, Kathryn A. (1999) "Postexperience Advertising Effects of Future Memory", *Journal of Consumer Research*, 25 (March), 319-334.
- Brucks, Merrie (1985) "The Effects of Product Class Knowledge on Information Search Behavior", *Journal of Consumer Research*, 12 (June), 1-16.
- Carver, Charles S. and Michael F. Scheier (1994) "Situational Coping and Coping Dispositions in a Stressful Transaction", *Journal of Personality and Social Psychology*, 66 (1), 184-195.
- Carver, Charles S., Michael F. Scheier and Jagdish Kumari Weintraub (1989) "Assessing Coping Strategies: A Theoretically Based Approach", *Journal of Personality and Social Psychology*, 56 (2), 267-283.
- Cohen, Joel B. and Charles S. Areni (1991) "Affect and Consumer Behavior", in Thomas S. Robertson and Harold H. Kassarian (Eds.), *Handbook of Consumer Behavior*, Englewood Cliffs, NY: Prentice Hall.

- Darley John M. and Thane S. Pittman (2003) "The Psychology of Compensatory and Retributive Justice", *Personality and Social Psychology review*, 7 (4), 324-336.
- Dawar, N. and P. Parker (1994) "Marketing universals: Consumers' use of brand name, price, physical appearance, and retailer reputation as signals of product quality", *Journal of Marketing*, 58 (2), 81-95.
- Desteno, David, Richard E. Petty, Duane T. Wegener and Derek D. Rucker (2000) "Beyond valence in the Perception of Likelihood: The Role of Emotion Specificity", *Journal of Personality and Social Psychology*, 78 (3), 397-416.
- Ellsworth, Phoebe C. and Craig A. Smith (1988) "From Appraisal to Emotion: Differences in Unpleasant Feelings", *Motivation and Emotion*, 12 (3), 271-302.
- Folkes, Valerie S. (1988) "Recent Attribution Research in Consumer Behaviour: A Review and New Directions", *Journal of Consumer Research*, 14 (March), 548-565.
- Folkes, Valerie S., S. Koletsky, and J. L. Graham (1987) "A Field Study of Causal Inferences and Consumer Reaction: The View from the Airport" *Journal of Consumer Research*, 13 (March), 534-539.
- Folkman Susan, Richard S. Lazarus, C. Dunkel-Schetter, A. DeLongis, and R.J. Gruen (1986) "Dynamics of a Stressful Encounter: Cognitive Appraisal, Coping, and Encounter Outcomes", *Journal of Personality and Social Psychology*, 50, 992-1003.
- Folkman, Susan and Judith Tedlie Moskowitz (2000) "Positive Affect and the Other Side of Coping", *American Psychologist*, 55 (6), 647-654.
- Folkman, Susan and Judith Tedlie Moskowitz (2004) "Coping: Pitfalls and Promises", *Annual Review of Psychology*, 55, 745-774.
- Frijda, Nico H. (1986) *The Emotions*, Cambridge, U.K.: Cambridge University Press.
- Frijda, Nico H. (1987) "Emotion, Cognitive structure, and Action tendency", *Cognition and Emotion*, 1 (2), 115-143.
- Garbarino, Ellen C. and Julie A. Edell (1997) "Cognitive Effort, Affect and Choice", *Journal of Consumer Research*, 24 (Sept.), 147-158.
- Gardner, Meryl P. (1985) "Mood States and Consumer Behaviour: A critical review", *Journal of Consumer Research*, 12 (Dec.), 281-300.
- Gorn, Gerald J., Marvin E. Goldberg and Kunal Basu (1993) "Mood, Awareness and Product Evaluation", *Journal of Consumer Psychology*, 2 (3), 237-256.
- Griffin, Dale. W, Aimee Drolet and Jennifer Aaker (2003) "The Time Course of Mixed Emotions", in Aimee Drolet and Loraine Lau-Gesk, Special Session Summary, "Mixed Emotional Experiences: Reactions to Affective Reality, *Advances in Consumer Research*, 30, 289.

- Hareli, Shlomo and Bernard Weiner (2002) "Social Emotions and Personality Inferences: A scaffold for a New Direction in the Study of Achievement Motivation", *Educational Psychologist*, 37(3), pp. 183-193.
- Hareli, Shlomo and Bernard Weiner (2000) "Accounts for Success as Determinants of Perceived Arrogance and Modesty, *Motivation & Emotion*, 24 93), pp. 215-236.
- Havlena, William J. and Morris B. Holbrook (1986) "The Varieties of Consumption Experience: Comparing Two Typologies of Emotion in Consumer Behaviour", *Journal of Consumer Research*, 13 (December), 394-404.
- Holbrook, Morris B. and Rajeev Batra (1987) "Assessing the Role of Emotions as Mediators of Consumer Responses to Advertising", *Journal of Consumer Research*, 14, 404-420.
- Isen, Alice M. (1993) "Positive Affect and Decision Making", in Michael Lewis and Jeanette M. Haviland (Eds.), *Handbook of Emotions*, New York, NY: Guilford Press, 261-277.
- Isen, Alice M. and Barbara Means (1983) "The influence of Positive Affect on Decision-making Strategy", *Social Cognition*, 2, 18-31.
- Izard, Carroll E. (1993) "Organizational and Motivational Functions of Discrete Emotions", in Michael Lewis and Jeanette M. Haviland (Eds.), *Handbook of Emotions*, New York, NY: Guilford Press, 631-641.
- Johnson, Allison R. and David W. Stewart (2005) "A Reappraisal of the Role of Emotion in Consumer Behaviour: Traditional and Contemporary Approaches", in Naresh K. Malhotra (Ed.), *Review of Marketing Research*, Vol. 1, Armonk, NJ: M. E. Sharpe, Inc, 3-33.
- Kahneman, Daniel (1973) "Attention and Effort", Englewood Cliffs; NJ: Prentice Hall.
- Keller, K. (1993) "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, 57 (January), 1-22.
- Keltner, Dacher, Phoebe C. Ellsworth, and K. Edwards (1993) "Beyond Simple Pessimism: Effects of Sadness and Anger on Social Perception", *Journal of Personality and Social Psychology*, 64, 740-752.
- Lazarus, Richard S. (1966) *Psychological Stress and the Coping Process*, New York, NY: McGraw-Hill.
- Lazarus, Richard S. (1983) "The Costs and Benefits of Denial", in S. Breznitz (Ed.), *The Denial of Stress*, New York, NY: International Universities Press, 1-30.
- Lazarus, Richard S. (1991) *Emotion and Adaptation*, New York, NY: Oxford University Press.
- Lazarus, Richard S. and Susan Folkman (1984) *Stress, Appraisal and Coping*, New York, NY: Springer.

- Lazarus, Richard S. and Susan Folkman (1987) "Transactional Theory and Research on Emotions and Coping", *European Journal of Personality*, 1, 141-169.
- Lerner, Jennifer S. and Dacher Keltner (2000) "Beyond Valence: Toward a model of emotion-specific influences on judgement and choice", *Cognition and Emotion*, 14 (4), 473-493.
- Lerner, Jennifer, Deborah A. Small and George Loewenstein (2004) "Heart Strings and Purse Strings: Carryover Effects of Emotions on Economic Decisions", *Psychological Science*, 15 95), 337-341.
- Lewinsohn, Shai and Haim Mano (1993) "Multi-attribute Choice and Affect: The Influence of Naturally Occurring and Manipulated Moods on Choice Processes", *Journal of Behavioral Decision Making*, 6, 33-51.
- Lewis, Michael (1993) "Self-Conscious Emotions: Embarrassment, Pride, Shame and Guilt", In Michael Lewis and Jeanette M. Haviland (Eds.), *Handbook of Emotions*, New York, NY: Guilford Press, 563-573.
- Loewenstein, George and Jennifer S. Lerner (2003) "The Role of Affect in Decision Making", in R.J. Davidson, K.R. Scherer and H.H. Goldsmith (Eds.), *Handbook of Affective Sciences*, New York, NY: Oxford University Press, 619-642.
- Luce, Mary Frances (1998) "Choosing to Avoid: Coping with Negatively Emotion-Laden Consumer Decisions", *Journal of Consumer Research*, 24 (March), 409-433.
- Luce, Mary Frances, James R. Bettman and John W. Payne (1997) "Choice Processing in Emotionally Difficult Decisions", *Journal of Experimental Psychology: Learning, Memory and Cognition*, 23 (2), 384-405.
- Luce, Mary Frances, John W. Payne and James R. Bettman (1999) "Emotional Trade-Off Difficulty and Choice", *Journal of Marketing Research*, 36 (May), 143-159.
- Lynch, John, G. (1983) "The Role of External Validity in Theoretical Research", *Journal of Consumer Research*, 10 (June), pp. 109-111.
- Mano, Haim (1990) "Emotional States and Decision Making", *Advances in Consumer Research*, 17, 577-584.
- Mano, Haim and Richard L. Oliver (1993) "Assessing the Dimensionality and Structure of the Consumption Experience: Evaluation, Feeling, and Satisfaction", *Journal of Consumer Research*, 20 (Dec.), 451-466.
- McCullough, Michael E., Jo-Ann Tsang and Robert A. Emmons (2004) "Gratitude in Intermediate Affective terrain: Links of Grateful Moods to Individual Differences and Daily Emotional Experience", *Journal of Personality and Social Psychology*, 86 (2), pp. 295-309.

- Mehrabian, Albert and James A. Russell (1974) *An Approach to Environmental Psychology*, Cambridge, Massachusetts: MIT Press.
- Nyer, Prashanth U. (1997) "A Study of the Relationships between Cognitive Appraisals and Consumption Emotions", *Journal of the Academy of Marketing Science*, 25 (4), 296-304.
- Oliver, Richard L. (1993) "Cognitive, Affective, and Attribute-bases of the Satisfaction Response", *Journal of Consumer Research*, 20 (Dec.), 418-430.
- Oliver, Richard L., Roland T. Rust and Sajeew Varki (1997) "Customer Delight: Foundations, Findings, and Managerial Insights", *Journal of Retailing*, 73 (3), 311-336.
- Ortony, Andrew, Gerald L. Clore and Allan Collins (1988) *The Cognitive Structure of Emotions*, Cambridge, Massachusetts: Cambridge University Press.
- Park, Crystal L. and Susan Folkman (1997) "Meaning in the Context of Stress and Coping", *Review of General Psychology*, 1 (2), 115-144.
- Payne, John W., James R. Bettman and Eric J. Johnson (1993) *The Adaptive Decision Maker*, Cambridge, Massachusetts: Cambridge University Press.
- Peeters, G. and J. Czapinski (1990) "Positive-negative Asymmetry in Evaluations: The distinction between affective and informational negative effects", *European Review of Social Psychology*, 1, 33-60.
- Pham, Michael T. (1998) "Representativeness, Relevance, and the Use of Feelings in Decision Making", *Journal of Consumer Research*, 25, 144-160.
- Pham, Michael T., Joel B. Cohen, John W. Pracejus, and G. David Hughes (2001) "Affect Monitoring and the Primacy of Feelings in Judgment", *Journal of Consumer Research*, 28 (September), 167-188.
- Plutchik, Robert (1980) *Emotion: A Psychoevolutionary Synthesis*, New York, NY: Harper and Row.
- Raghunathan, Rajagopal and Kim P. Corfman (2004) "Sadness as Pleasure-Seeking Prime and Anxiety as Attention-Seeking Prime: The 'Different Affect-Different Effect' (DADE) Model", *Motivation and Emotion*, 28 (1), 23-41.
- Raghunathan, Rajagopal, and Michael T. Pham (1999) "All Negative Moods Are Not Equal: Motivational Influences on Anxiety and Sadness on Decision Making", *Organizational Behavior and Human Decision Processes*, 79 (1), 56-77.
- Redelmeier, Donald A. and Daniel Kahneman (1989) "Patients' memories of painful medical treatments: real-time and retrospective evaluations of two minimally invasive procedures", *Pain*, 66 (1), 3-8.
- Richins, Marsha (1997) "Measuring Emotions in the Consumption Experience", *Journal of Consumer Research*, 24 (September), 127-146.

- Roseman, Ira J. (1984) "Cognitive Determinants of Emotion: A structural theory", in P. Shaver (Ed.), *Review of Personality and Social Psychology: Emotions, relationships, and health*, Vol. 5, Beverley Hills, CA: Sage, 11-36.
- Roseman, Ira J. (1991) "Appraisal Determinants of Discrete Emotions", *Cognition and Emotion*, 5, 161-200.
- Roseman, Ira J. and Andreas Evdokas (2004) "Appraisals Cause Experienced Emotions: Experimental Evidence", *Cognition and Emotion*, 18 (1), 1-28.
- Rucker, Derek D. and Richard E. Petty (2004) "Emotion Specificity and Consumer Behavior: Anger, Sadness, and Preference for Activity", *Motivation and Emotion*, 28 (1), 3-21.
- Rust, Roland T and Richard L. Oliver (2000) "Should We Delight the Customer?", *Journal of the Academy of Marketing Science*, 28 (1), 86-94.
- Ruth, Julie A., Frédéric F. Brunel, and Cele C. Otnes (2002) "Linking Thoughts to Feelings: Investing Cognitive Appraisals and Consumption Emotions in a Mixed-Emotions Context", *Journal of the Academy of Marketing Science*, 30 (1), 44-58.
- Scherer, Klaus R. (1988) Criteria for Emotion-Antecedent Appraisals: A review", in V. Hamilton, G. H. Bower and N. H. Frijda (Eds.), *Cognitive Perspectives on Emotion and Motivation*, Dordrecht, The Netherlands: Kluwer Academic Publishers, 89-126.
- Scherer, Klaus R. and Grazia Ceschi (1997) "Lost Luggage: A Field Study of Emotion-Antecedent Appraisal", *Motivation and Emotion*, 21 (3), 211-235.
- Schwartz, Barry, Andrew Ward, John Monterosso, Sonya Lyubomirsky, Katherine White and Darrin Lehman (2002) "Maximizing versus Satisficing: Happiness is a Matter of Choice", *Journal of Personality and Social Psychology*, 83 (5), 1178-1197.
- Schwarz, Norbert (1990) "Feelings as Information: Informational and Motivational Functions of Affective States", in R. M. Sorrentino and E.T. Higgins (Eds.), *Handbook of Motivation and Cognition*, Vol. 2, New York, NY: Guilford Press, 527-561.
- Shaver, Phillip, Judith Schwartz, Donald Kirson and Cary O'Connor (1987) "Emotion Knowledge: Further Exploration of a Prototype Approach", *Journal of Personality and Social Psychology*, 52 96), 1061-1086.
- Shiv, Baba and Alexander Fedorikhin (1999) "Heart and Mind in Conflict: the Interplay of Affect and Cognition in Consumer Decision-making", *Journal of Consumer Research*, 26 (Dec.), 278-292.
- Skitka, Linda J. and Faye J. Crosby (2003) "Trends in the Social Psychological Study of Justice", *Personality and Social Psychology Review*, 7 (4), 282-285.



- Smith, Amy K and Ruth N. Bolton (2002) "The Effects of Customers' Emotional responses to Service Failures on Their Recovery Effort Evaluations and Satisfaction Judgments", *Journal of the Academy of Marketing Science*, 31 (1), 5-23.
- Smith, Craig A. and Phoebe C. Ellsworth (1985) "Patterns of Cognitive Appraisals in Emotions", *Journal of Personality and Social Psychology*, 48, 813-838.
- Smith, C.A., Haynes, K.N., Lazarus, R.S., & Pope, L.K. (1993) "In Search of 'Hot' Cognitions: Attributions, Appraisals, and Their Relation to Emotion", *Journal of Personality and Social Psychology*, 65 (5), 916-929.
- Stephens, Nancy and Kevin P. Gwinner (1998) "Why Don't Some People Complain? A Cognitive-Emotive Process Model of Consumer Complaint Behavior", *Journal of the Academy of Marketing Science*, 26 (3), 172-189.
- Sullivan, Gavin B. and Kenneth T. Strongman (2003) "Vacillating and Mixed Emotions: A Conceptual-Discursive Perspective on Contemporary Emotion and Cognitive Appraisal Theories Through Examples of Pride", *Journal of the Theory of Social Behaviour*, 33 (2), 203-226.
- Taylor, Shelley E. (1991) "Asymmetrical Effects of Positive and Negative Events: The Mobilization-Minimization Hypothesis", *Psychological Bulletin*, 110 (1), 67-85.
- Tiedens, Larissa Z., and Susan Linton (2001) Judgment Under Emotional Certainty and Uncertainty: The Effects of Specific Emotions on Information Processing", *Journal of Personality and Social Psychology*, 81 (6), 973-988.
- Wason, Kelly D., Michael J. Polonsky and Michael R. Hyman (2002) "Designing Vignette Studies in Marketing", *Australasian Marketing Journal*, 10 (3), 41-58.
- Watson, David and Auke Tellegen (1985) "Towards a Consensual Structure of Mood", *Psychological Bulletin*, 98 (Sept.), 219-235.
- Weber, Hannelore (2004) "Explorations in the Social Construction of Anger", *Motivation & Emotion*, 28 (2), pp. 197-219.
- Wegener, Dwayne T., Richard E. Petty, and Stephen M. Smith (1995) "Positive Mood Can Increase or Decrease Message Scrutiny: The Hedonic Contingency View of Mood and Message Processing", *Journal of Personality and Social Psychology*, 69 (1), 5-15.
- Weiner, Bernard (1985) "An Attributional Theory of Achievement Motivation and Emotion", *Psychological Review*, 92 (4), 548-573.
- Weiner, Bernard (1986) "Attribution, Emotion and Action", in R. M. Sorrentino and E.T. Higgins (Eds.), *Handbook of Motivation and Cognition*, Vol. 1, 281-312.

- Weiner, Bernard (2000) "Attributional Thoughts about Consumer Behaviour", *Journal of Consumer Research*, 27 (Dec.), 382-387.
- Westbrook, Robert A. (1987) "Product/Consumption-Based Affective Responses and Post-Purchase Processes", *Journal of Marketing Research*, 24 (Aug.), 258-270.
- Westbrook, Robert A. and Richard L. Oliver (1991) "The Dimensionality of Consumption Emotion Patterns and Consumer Satisfaction", *Journal of Consumer Research*, 18 (June), 84-91.
- Yi, Sunghwan, and Hans Baumgartner (2004) "Coping With Negative Emotions in Purchase-Related Situations", *Journal of Consumer Psychology*, 14 (3), 303-317.
- Zaichowsky, Judith Lynne (1985) "Measuring the Involvement Construct", *Journal of Consumer Research*, 12 (Dec.), 341-352.
- Zajonc, R.B. (1980) "Feeling and Thinking: Preferences Need No Inferences", *American Psychologist*, 35 (2), 151-175.
- Zaltman, G., Lemasters, K., & Heffring, M. (1982). *Theory Construction in Marketing: Some Thoughts on Thinking*. John Wiley & Sons, NY.
- Zammuner, Vanda Lucia (1996) "Felt emotions, and Verbally Communicated Emotions: The Case of Pride", *European Journal of Social Psychology*, 26, pp. 233-245.

### Appendix 1: Appraisal Definitions Found in the Emotion Literature

| Outcome Desirability                   |   |   |
|--|---|---|
| <i>Pleasantness</i>                    |   |   |
| Ortony, Clore and Collins (1988, p.57) | appealingness                             | people's evaluations relative to attitudes or predispositions to like or dislike certain objects or activities  |
| Scherer (1988, p. 97)                  | intrinsic pleasantness                    | the inherent pleasantness/unpleasantness or hedonic valence of the event...in its own right, independent of the current goal priority or degree of conduciveness of the event to further goal attainment. |
| Smith & Ellsworth (1985, p. 818)       | pleasantness                              | intrinsic pleasantness of a situation   |
| Frijda (1987, p. 119)                  | valence or pleasantness                   | the event was pleasant or unpleasant  |
| Nyer (1997, p. 297)                    | goal congruency                           | the extent to which an event or outcome is congruent with an individual's wants or desires  |
| <i>Goal Consistency</i>                |   |   |
| Ortony, Clore and Collins (1988, p.49) | desirability                              | the degree to which an event is or would be beneficial, of value, worth or utility  |
| Roseman (1991, p. 192)                 | motive consistency                        | assesses the consistency of events with motives   |
|  | appetitive/aversive                       | whether motives are states to be attained or avoided  |
| Scherer (1988, pp. 97, 99, 101)        | goal relevance                            | whether an event produces outcomes which affect needs or goals  |
|  | goal-related valence                      | degree to which events further one's plans or goals   |
|  | goal consistency                          | consistency of one's state following an event with the expected state predicted for that point in the goal/path plan  |
| Smith & Ellsworth (1985, p. 818)       | perceived obstacle or goal/ path obstacle | perception of something standing in the way of a goal   |
| Frijda (1987, p. 120)                  | open/closed                               | offering possibility for approach or escape   |
| Nyer (1997, p.297)                     | goal relevance                            | the extent to which an event or outcome is personally relevant to the individual  |
| Johnson and Stewart (2005)             | goal importance                           | the appraised importance of a goal is associated with the value or desirability of the state that is sought   |
|  | direction of goal congruence              | whether a situation is perceived to move the individual closer to or away from desired goals  |
|  | degree of goal congruence                 | the degree to which the situation meets expectations or approximates the desired state  |

| <b>Agency</b>                                 |                                   |   |
|---|-----------------------------------|---|
| <i>Agency</i>                                 |                                   |   |
| Ortony, Clore and Collins (1988, pp.134-5)    | praiseworthiness                  | the degree to which the experiencer believes an agent to be responsible for a situation, and hence subject to praise or blame for his or her actions          |
| Roseman (1991, p. 163)                        | agency                            | whether an outcome is seen as caused by impersonal circumstances, some other person, or the self  |
| Scherer (1988, pp.98-99)                      | agent cause                       | the perceived or attributed cause of the event. ...the motive intention, or goal of the agent... need[s] to be integrated into the appraisal criteria scheme. |
| Smith & Ellsworth (1985, p. 818)              | self/ other responsibility        | The extent to which oneself, someone or something else, is responsible for bringing about the event that arouses emotion                                      |
| Frijda (1987, p. 120)                         | agency or responsibility          | the event was considered due to the responsibility of some other person or of the self  |
| Nyer (1997, p. 297)                           | attribution                       | the person responsible for and having control over the event or outcome   |
| Johnson and Stewart (2005)                    | agency                            | assessing whether the person or object is causal or responsible for outcomes in the situation   |
| <i>Intention (when separated from agency)</i> |                                   |   |
| Smith & Ellsworth (1985, p. 819)              | human/ situational control        | whether events were controlled by the person, another person or impersonal circumstances  |
| Frijda (1987, p. 120)                         | controllability                   | an event was controllable or uncontrollable   |
| <b>Fairness</b>                               |                                   |   |
| Ortony, Clore and Collins (1988, p.53)        | praiseworthiness/ blameworthiness | the degree that people do things that appear to us to uphold valued standards   |
| Roseman (1991, p. 163):                       | legitimacy                        | whether an outcome is deserved or undeserved  |
| Smith & Ellsworth (1985, p.819):              | legitimacy                        | the legitimacy or fairness of the outcome   |
| Scherer (1982):                               | norm/self concept compatibility   | evaluation of an outcome in terms of social norms or personal standards   |
| Johnson and Stewart (2005)                    | normative/ moral compatibility    | an assessment of the situation in terms of what is deemed to be normal and right by the individual and within a specific context                              |

| <b>Certainty</b>                             |                    |  |
|--|--------------------|--|
| Ortony, Clore and Collins (1988, p. 65, 84): | likelihood         | probability of future events occurring, degree of belief that an anticipated event will occur  |
| Roseman (1991, p. 163)                       | probability        | whether a given outcome is judged to be certain or uncertain   |
| Smith & Ellsworth (1985, p. 818):            | certainty          | predictability of outcomes   |
| Frijda (1987, p. 120)                        | certainty          | certainty or uncertainty regarding an event's outcome  |
| Scherer (1988, p. 100)                       | probability        | the probability of the occurrence of specific outcomes is part of the relevance appraisal  |
| Johnson and Stewart (2005)                   | certainty          | the extent to which a situation implies an outcome that is known with confidence   |
| <b>Attention</b>                             |                    |  |
| Smith and Ellsworth (1985, p. 817)           | attention          | whether to attend to a stimulus, ignore it, or avoid it  |
| Ortony, Clore and Collins (1988, p. 64):     | unexpectedness     | violations of event-based or person-based expectations   |
| Frijda, 1987, p. 119                         | expectedness       | an event was expected or unexpected  |
|  | interest           | the event was interesting or neutral   |
| Scherer (1988, p. 95)                        | novelty            | occurs when a stimulus situation deviates from the pattern expected or projected for a given point in time   |
| <b>Coping Potential</b>                      |                    |  |
| Ortony, Clore and Collins (1988, p. 84)      | effort             | the degree to which resources are expended in obtaining or avoiding an anticipated event   |
| Smith & Ellsworth (1985, p. 819)             | anticipated effort | the anticipation of having to expend effort to deal with a situation   |
| Scherer (1988, p. 102-3)                     | coping potential   | having the power to influence the occurrence or events or outcomes and/or the ability to adjust personal concerns and goals to irreversible outcomes |
| Roseman (1991, p. 188)                       | power              | believing oneself to be in a position of strength or weakness  |
| Frijda (1987, p. 119, 120)                   | modifiability      | an event appeared to be capable of being modified or was final   |
|  | coping potential   | the event appeared to be something one could cope or not cope with   |
| Nyer (1997, p.297)                           | coping potential   | the potential for and consequences of engaging in coping activity  |

## Appendix 2: Study 1 Scenarios

Items that are italicized indicate *agency* manipulations. Items that are underlined indicate outcome desirability manipulations.

### Desirable/Self-caused

It's Friday afternoon and you've spent the last hour or so navigating your way through the crowds at the shopping mall. You decide to call a friend and see what they're doing this weekend. *As you are dialling your phone you stop looking where you are going. You turn a corner and slam into a post so hard that you nearly knock yourself right off your feet. You lose your grip on your mobile phone on impact and breaks into 4 pieces when it hits the ground.* You got your mobile phone about 3 years ago for \$199 with your service plan. It has always been slightly defective. Because they no longer make your model of phone, you can't make use of your phone's replacement policy. However, you will receive a cheque for \$500 from your insurance company that can be used to pay replacement costs.

### Desirable/Other-caused

It's Friday afternoon and you've spent the last hour or so navigating your way through the crowds at the shopping mall. You decide to call a friend and see what they're doing this weekend. *When you reach for your mobile you find it missing. You immediately think back to that jerk who ran into you earlier and disappeared into the crowd without even a backwards glance. You're sure that he ran into you on purpose and he stole your phone.* You got your mobile phone about 3 years ago for \$199 with your service plan. It has always been slightly defective. Because they no longer make your model of phone, you can't make use of your phone's replacement policy. However, you will receive a cheque for \$500 from your insurance company that can be used to pay replacement costs.

### Desirable/Circumstance-caused

It's Friday afternoon and you've spent the last hour or so navigating your way through the crowds at the shopping mall. You decide to call a friend and see what they're doing this

weekend. *When you go to turn it on it isn't working. You bring it into a shop to have it looked at and they tell you that a recent lightning strike caused a freak power surge that has affected some people's mobile phones. It is not the fault of your network provider and it can't be fixed.* You got your mobile phone about 3 years ago for \$199 with your service plan. It has always been slightly defective. Because they no longer make your model of phone, you can't make use of your phone's replacement policy. However, you will receive a cheque for \$500 from your insurance company that can be used to pay replacement costs.

### **Undesirable/Self-caused**

It's Friday afternoon and you've spent the last hour or so navigating your way through the crowds at the shopping mall. You decide to call a friend and see what they're doing this weekend. *As you are dialling your phone you stop looking where you are going. You turn a corner and slam into a post so hard that you nearly knock yourself right off your feet. You lose your grip on your mobile phone on impact and breaks into 4 pieces when it hits the ground.* You got your mobile phone about 3 months ago for \$799 with your service plan. It has always been a really great phone. Because they no longer make your model of phone, you can't make use of your phone's replacement policy. However, you will receive a cheque for \$500 from your insurance company that can be used to pay replacement costs.

### **Undesirable/Other-caused**

It's Friday afternoon and you've spent the last hour or so navigating your way through the crowds at the shopping mall. You decide to call a friend and see what they're doing this weekend. *When you reach for your mobile you find it missing. You immediately think back to that jerk who ran into you earlier and disappeared into the crowd without even a backwards glance. You're sure that he ran into you on purpose and he stole your phone.* You got your mobile phone about 3 months ago for \$799 with your service plan. It has always been a really great phone. Because they no longer make your model of phone, you can't make use of your

phone's replacement policy. However, you will receive a cheque for \$500 from your insurance company that can be used to pay replacement costs.

### **Undesirable/Circumstance-caused**

It's Friday afternoon and you've spent the last hour or so navigating your way through the crowds at the shopping mall. You decide to call a friend and see what they're doing this weekend. *When you go to turn it on it isn't working. You bring it into a shop to have it looked at and they tell you that a recent lightning strike caused a freak power surge that has affected some people's mobile phones. It is not the fault of your network provider and it can't be fixed.* You got your mobile phone about 3 months ago for \$799 with your service plan. It has always been a really great phone. Because they no longer make your model of phone, you can't make use of your phone's replacement policy. However, you will receive a cheque for \$500 from your insurance company that can be used to pay replacement costs.



### Appendix 3: Study 1 Questionnaire

#### Section 1

Please answer the following questions in the spaces provided.

1) Do you currently own a mobile phone? Yes \_\_\_\_ No \_\_\_\_

If yes, what brand and model of phone do you have? Brand: \_\_\_\_\_

Model: \_\_\_\_\_

2) Do you have a preferred mobile phone brand? Yes \_\_\_\_ No \_\_\_\_

If yes, please name the brand. Brand: \_\_\_\_\_

3) Please click on the numbers that best correspond to your feelings about mobile phones. Do not ponder over individual items. It is your first impressions, the immediate feelings about the items, which matter.

#### Mobile Phones:

|                    |   |   |   |   |   |   |   |              |
|--------------------|---|---|---|---|---|---|---|--------------|
| don't matter to me | 1 | 2 | 3 | 4 | 5 | 6 | 7 | matter to me |
| undesirable        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | desirable    |
| useless            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | useful       |
| unwanted           | 1 | 2 | 3 | 4 | 5 | 6 | 7 | wanted       |
| not needed         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | needed       |

4) How familiar are you with the mobile phone market?  
not at all familiar 1 2 3 4 5 6 7 extremely familiar

5) How would you rate your mobile phone knowledge, as compared to the average person?  
one of the least knowledgeable 1 2 3 4 5 6 7 one of the most knowledgeable

6) Do you consider yourself to be an expert on mobile phones?  
no expertise 1 2 3 4 5 6 7 a great deal of expertise

#### Section 2

Please read the following scenario *more than once* and *immerse yourself in it*. **This is very important.** Picture yourself in the following situation. Try to imagine *as vividly as you can* what it would be like to be in this situation. Visualize it as if it is *actually* happening. Focus on your thoughts and feelings as the situation unfolds. Think about how you would *actually* respond.

(See Appendix 2 for the six possible product loss scenarios. Only one of those scenarios will appear to the respondent. The entire scenario will appear in bold typeface with no italics or underlining.)

### Section 3

For each item, please click on the number that best describes how you would feel in the situation described above.

|                      | not at all |   |   |   | extremely |   |   |
|----------------------|------------|---|---|---|-----------|---|---|
| happy                | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| excited              | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| proud                | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| pleased              | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| appreciative         | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| grateful             | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| pleasantly surprised | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| delighted            | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| regretful            | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| guilty               | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| annoyed              | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| angry                | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| disappointed         | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| frustrated           | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| sad                  | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| miserable            | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| anxious              | 1          | 2 | 3 | 4 | 5         | 6 | 7 |
| hopeful              | 1          | 2 | 3 | 4 | 5         | 6 | 7 |

### Section 4

For each item, please click on the number that best describes how you would evaluate the situation described above.

- 1) How important was this situation to you?  
not at all important    1    2    3    4    5    6    7    extremely important
- 2) To what extent was what was happening in this situation relevant to you?  
not at all relevant    1    2    3    4    5    6    7    extremely relevant
- 3) How pleasant was this situation?  
not at all pleasant    1    2    3    4    5    6    7    extremely pleasant
- 4) How good did you feel about this situation?  
not at all good    1    2    3    4    5    6    7    extremely good
- 5) How stimulating was this situation?  
not at all stimulating    1    2    3    4    5    6    7    extremely stimulating
- 6) To what extent did you feel wound up by this situation?  
not at all wound up    1    2    3    4    5    6    7    extremely wound up
- 7) How favourable was this situation to you?  
not at all favourable    1    2    3    4    5    6    7    extremely favourable
- 8) To what extent did you consider the outcome of this situation desirable?  
not at all desirable    1    2    3    4    5    6    7    extremely desirable
- 9) How responsible did you feel for bringing about this situation?

**not at all responsible      1      2      3      4      5      6      7      extremely responsible**

10) To what extent did you feel like you were in control of what was happening in this situation?

**no control      1      2      3      4      5      6      7      a great deal of control**

11) How responsible did you think someone else was for bringing about this situation?

**not at all responsible      1      2      3      4      5      6      7      extremely responsible**

12) To what extent did you feel like someone else was controlling what was happening in this situation?

**no control      1      2      3      4      5      6      7      a great deal of control**

13) How responsible did you think circumstance was for bringing about this situation?

**not at all responsible      1      2      3      4      5      6      7      extremely responsible**

14) To what extent did you feel like the circumstances of this situation were beyond anyone's control?

**no control      1      2      3      4      5      6      7      a great deal of control**

15) To what extent did you feel cheated or wronged in this situation?

**not at all cheated      1      2      3      4      5      6      7      extremely cheated**

16) How fair was what was happening to you in this situation?

**not at all fair      1      2      3      4      5      6      7      extremely fair**

17) How certain were you about what was occurring in this situation?

**not at all certain      1      2      3      4      5      6      7      extremely certain**

18) To what extent did you feel like you understood what was happening in this situation?

**no understanding      1      2      3      4      5      6      7      a great deal of understanding**

19) How much effort did you expect to have to expend to deal with this situation?

**no effort      1      2      3      4      5      6      7      a great deal of effort**

20) To what extent did you feel like you would need to exert yourself to deal with this situation?

**no exertion      1      2      3      4      5      6      7      a great deal of exertion**

## Section 5

1) It is now time to replace your mobile phone. Please choose from the mobile phone models shown on the next page using the information provided.

Once again, imagine how you would feel in this situation. Think about what it would be like to go without a mobile phone. How quickly would you want to replace it? Think about the effort you would want to put into making your selection. Try to simulate that time and effort when making your choice.

Remember that they no longer make your current phone and you have received a \$500 cheque to put towards the purchase.

To conduct your search:

To view a piece of information click on the square you wish to view. You may take as long as you like and view as many pieces of information as you like. There is no right or wrong answer. We just want your honest opinions.

When you have made your decision, click on the “finished” button. You will then be prompted to indicate which mobile phone you chose. Follow the prompts to enter your choice and return to the questionnaire.

To begin selecting a new phone, click the “begin” button.

## Section 5

To conduct your search:

- To view a piece of information click on the square you wish to view.
- You may take as long as you like and view as many pieces of information as you like. There is no right or wrong answer. We just want your honest opinions.

When you have made your decision, click on the “finished” button. You will then be prompted to indicate which mobile phone you chose. Follow the prompts to enter your choice and return to the questionnaire.



| Brand         | Panasonic  | Siemens  | Nokia  | LG   | Samsung  | Sharp   | Philips  | Motorola  | Sony-Ericsson  |
|---------------|--|--|--|--|--|---|--|---|--|
| Model         | G70  | CX65   | 3120   | G7020  | SGH-X600                                       | GX30  | Fisio 120                                      | V300  | K700i  |
| Price         | \$379  | \$449  | \$289  | \$619  | \$549  | \$829   | \$189  | \$499   | \$719  |
| Network bands | Tri-band<br>900/1800/1900<br>(Europe/Asia-Pacific/Africa/<br>limited Americas) | Tri-band<br>900/1800/1900<br>(Europe/Asia-Pacific/Africa/<br>limited Americas) | Tri-band<br>900/1800/1900<br>(Europe/Asia-Pacific/Africa/<br>limited Americas) | Dual-band<br>900/1800<br>(Europe/Asia-Pacific) | Dual-band<br>900/1800<br>(Europe/Asia-Pacific) | Quad-band<br>850/900/1800/1900<br>(Europe/Asia-Pacific/Africa/<br>Americas) | Dual-band<br>900/1800<br>(Europe/Asia-Pacific) | Quad-band<br>850/900/1800/1900<br>(Europe/Asia-Pacific/Africa/<br>Americas) | Tri-band<br>900/1800/1900<br>(Europe/Asia-Pacific/Africa/<br>limited Americas) |
| Talk time     | up to 270 mins   | up to 300 mins   | up to 360 mins   | up to 150 mins                                 | up to 210 mins                                 | up to 210 mins  | Up to 240 mins                                 | up to 525 mins  | up to 480 mins   |
| Standby time  | up to 200 hrs  | up to 250 hrs  | up to 410 hrs  | up to 200 hrs                                  | up to 250 hrs                                  | up to 216 hrs   | Up to 350 hrs                                  | up to 211 hrs   | up to 300 hrs  |
| Size          | 88 x 60 x 27 mm<br>85g   | 108 x 46 x 18 mm<br>90g  | 102 x 43 x 19 mm<br>87g  | 88 x 44 x 20 mm<br>99g                         | 102 x 43 x 20 mm<br>85g                        | 95 x 49 x 26 mm<br>110g   | 106 x 49 x 22 mm<br>95g                        | 88 x 47 x 23 mm<br>95g  | 99 x 47 x 20 mm<br>93g   |

|                              |   |  |  |   |                               |   |                   |   |                                |
|------------------------------|---|--|--|---|-------------------------------|---|-------------------|---|--------------------------------|
| <b>Messaging</b>             | Concatenated SMS, EMS   | SMS, MMS, Email  | SMS, EMS, MMS                          | SMS, EMS  | SMS, EMS, MMS                 | SMS, EMS, MMS, Email  | SMS               | SMS, SMS chat, EMS, MMS, Email, Nokia Smart Messaging                         | SMS, EMS, MMS, Email           |
| <b>Memory</b>                | Internal: yes   | Internal: 11Mb   | Internal: yes                          | Internal: yes   | Internal: 9Mb                 | Internal: 6Mb<br>External: supported  | no                | Internal: 5Mb   | Internal: 41Mb                 |
| <b>Internet applications</b> | WAP 1.2.1   | WAP 2.0, JAVA add-on   | WAP 1.2.1, XHTML, Java MIDP 2.0 add-on | WAP 1.2.1   | WAP 2.0, JAVA add-on          | WAP 2.0, Java MIDP 2.0  | no                | WAP 2.0, JAVA add-on  | WAP 2.0, cHTML, Java supported |
| <b>Connectivity</b>          | data cable  | data cable, IrDA   | DKU-5 data cable                       | serial cable, IrDA  | USB cable, IR                 | Bluetooth, data cable, infrared   | data cable        | USB cable   | Bluetooth, USB cable, infrared |
| <b>Display</b>               | Internal: 4096 colours STN LCD 128x96<br>External: monochrome LCD | 65,536 colour TFT LCD 132x176  | 4,096 colour CSTN LCD 128x128          | Internal: 65,536 colour STN LCD 128x160<br>External: monochrome STN LCD w backlight 96x64 | 65,536 colour STN LCD 128x128 | Internal: 2.2 inch 256K colour CGS LCD 240x320<br>External: 65,536 colour LCD 240x320 | Graphics, 4 lines | Internal: 65,536 colour TFT LCD 176x220<br>External: White/Blue LED LCD 96x32 | 65,536 colour TFT LCD 176x220  |
| <b>Camera</b>                | no  | Integrated VGA (640x480) with 5x digital zoom, still & video support | no                                     | no  | Integrated VGA (640x480)      | 1 MP (858x1144) with video & flash  | no                | Integrated VGA (640x480)  | Integrated VGA still and video |

## Section 5

To conduct your search:

- To view a piece of information click on the square you wish to view.
- You may take as long as you like and view as many pieces of information as you like. There is no right or wrong answer. We just want your honest opinions.

When you have made your decision, click on the “finished” button. You will then be prompted to indicate which mobile phone you chose. Follow the prompts to enter your choice and return to the questionnaire.

**Click on  
the phone  
you  
would  
like to  
select**



## Section 6

The following questions will ask you to provide information about how you made your decision.

1) When selecting your mobile phone, which ***five (5) product features*** did you think were the most important?

Please “rank” the features below in order of importance using the drop down menus provided (where 1 is the most important and 5 is the least important out of the 5). If one of the features is not listed, please type it in one of the blank space below. Please choose ***only five (5)*** features.

| <b><u>Feature:</u></b>                         | <b><u>Rank:</u></b> | <b><u>Feature:</u></b>                | <b><u>Rank:</u></b> |
|--|---------------------|---------------------------------------|---------------------|
| <input type="checkbox"/> Design                | _____               | <input type="checkbox"/> Brand        | _____               |
| <input type="checkbox"/> Model                 | _____               | <input type="checkbox"/> Price        | _____               |
| <input type="checkbox"/> Network bands         | _____               | <input type="checkbox"/> Talk time    | _____               |
| <input type="checkbox"/> Standby time          | _____               | <input type="checkbox"/> Size         | _____               |
| <input type="checkbox"/> Messaging             | _____               | <input type="checkbox"/> Memory       | _____               |
| <input type="checkbox"/> Internet Applications | _____               | <input type="checkbox"/> Connectivity | _____               |
| <input type="checkbox"/> Display               | _____               | <input type="checkbox"/> Camera       | _____               |
| <b><u>Other Feature:</u></b>                   |                     | <b><u>Rank:</u></b>                   |                     |
| _____  |                     | _____                                 |                     |
| _____  |                     | _____                                 |                     |
| _____  |                     | _____                                 |                     |

2) Please take the next few minutes to briefly describe your selection process when choosing your new mobile phone (i.e. how you evaluated or eliminated options).

(text box provided)

3) Did you feel any time pressure when making your decision?

no pressure      1      2      3      4      5      6      7      a great deal of pressure

4) To what extent did you feel like you had enough time in which to make your decision?

no time      1      2      3      4      5      6      7      a great deal of time



5) Please circle the number that you believe relates to you the most closely.

|   | completely disagree |   |   |   |   | completely agree |   |  |
|---|---------------------|---|---|---|---|------------------|---|--|
|   | 1                   | 2 | 3 | 4 | 5 | 6                | 7 |  |
| Whenever I am faced with a choice, I try to imagine what all of the possibilities are, even ones that aren't present at the moment. |                     |   |   |   |   |                  |   |  |
| I never settle for second best.   | 1                   | 2 | 3 | 4 | 5 | 6                | 7 |  |
| When I watch TV I channel surf, often scanning through the available options even while attempting to watch one program.            | 1                   | 2 | 3 | 4 | 5 | 6                | 7 |  |
| I treat relationships like clothing: I expect to try a lot on before finding the perfect fit.                                       | 1                   | 2 | 3 | 4 | 5 | 6                | 7 |  |
| I'm a big fan of lists that attempt to rank things (the best movies, singers, etc.).  | 1                   | 2 | 3 | 4 | 5 | 6                | 7 |  |

## Section 7

1) To what extent did concern about going without a mobile phone influence your choice?  
 no influence      1      2      3      4      5      6      7      a great deal of influence

2) How important was it to you that you make a good decision?  
 not at all important      1      2      3      4      5      6      7      extremely important

3) How confident are you that you made a good decision?  
 not at all confident      1      2      3      4      5      6      7      extremely confident

4) How satisfied are you with the decision that you made?  
 not at all satisfied      1      2      3      4      5      6      7      extremely satisfied

5) To what extent do you believe your decision was a wise one?  
 not at all wise      1      2      3      4      5      6      7      extremely wise

6) Do you think that your purchase decision:

- ☐ Left you better off than you were originally?
- ☐ Made you worse off than you were originally?
- ☐ Left you neither better nor worse off than you were originally?

## Section 8

Thank you very much for taking the time to complete this questionnaire! Please indicate your preferred choice of compensation for your time and effort by choosing one of the two options below.

A **unique response code** will appear on the next screen when you hit the continue button. **Write down that code.** This is important! Without that code I can not guarantee that you will receive compensation.

Deliver the code to Lisa Watson along with

- Your name and
- The name of your relevant course

Using one of the following methods:

- In her office (3124 of the business school)
- By email at [lwatson@staff.bond.edu.au](mailto:lwatson@staff.bond.edu.au)
- By phone at 559 52285

Once your participation code has been verified, your grade will be assigned or your name entered into the draw. The purpose of the code is to ensure that your responses remain confidential. Your identity will not be linked to your responses in any data files.

- ☐ If you have completed this questionnaire for course credit in either MKTG11-300 or MKTG12-301 please check this box and you will be given a unique code to present to your instructor for verification. *Note: the code is in no way traceable to the responses you have provided.*
- ☐ If you have completed this questionnaire for a chance to win a prize (approximate value \$100) please check this box and you will be given a unique code to present to Lisa Watson for verification. *Note: the code is in no way traceable to the responses you have provided.*

## Code:

***Write down this code.*** This is important! Without that code I can not guarantee that you will receive compensation.

To receive your compensation, deliver

- the code
- your name, and
- the name of your relevant course

to Lisa Watson using one of the following methods:

- In her office (3124 of the business school)
- By email at [lwatson@staff.bond.edu.au](mailto:lwatson@staff.bond.edu.au)
- By phone at 559 52285

Once your participation code has been verified, your grade will be assigned or your name entered into the draw. The purpose of the code is to ensure that your responses remain confidential. Your identity will not be linked to your responses in any data files.

***Thank you very much for taking the time to complete this questionnaire!***

## Appendix 4: Study 2 Questionnaire

### Section 1

Please answer the following questions in the spaces provided.

1) What year was it when you bought your last car? Year: \_\_\_\_\_

2) What is the total number of cars that you have ever bought? Cars Bought: \_\_\_\_\_

3) Do you currently own a car? Yes \_\_\_\_ No \_\_\_\_

If yes, what make and model of car do you have? Make/Brand: \_\_\_\_\_

Model: \_\_\_\_\_

4) Do you have a preferred car brand? Yes \_\_\_\_ No \_\_\_\_

If yes, please name the brand. Brand: \_\_\_\_\_

5) Please click on the numbers that best correspond to your feelings about cars. Do not ponder over individual items. It is your first impressions, the immediate feelings about the items, which matter.

#### Cars:

|                    |   |   |   |   |   |   |   |              |
|--------------------|---|---|---|---|---|---|---|--------------|
| don't matter to me | 1 | 2 | 3 | 4 | 5 | 6 | 7 | matter to me |
| undesirable        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | desirable    |
| useless            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | useful       |
| unwanted           | 1 | 2 | 3 | 4 | 5 | 6 | 7 | wanted       |
| not needed         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | needed       |

6) How familiar are you with the car market?

|                     |   |   |   |   |   |   |   |                    |
|---------------------|---|---|---|---|---|---|---|--------------------|
| not at all familiar | 1 | 2 | 3 | 4 | 5 | 6 | 7 | extremely familiar |
|---------------------|---|---|---|---|---|---|---|--------------------|

7) How would you rate your car knowledge, as compared to the average person?

|                                |   |   |   |   |   |   |   |                               |
|--------------------------------|---|---|---|---|---|---|---|-------------------------------|
| one of the least knowledgeable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | one of the most knowledgeable |
|--------------------------------|---|---|---|---|---|---|---|-------------------------------|

8) Do you consider yourself to be an expert on cars?

|              |   |   |   |   |   |   |   |                           |
|--------------|---|---|---|---|---|---|---|---------------------------|
| no expertise | 1 | 2 | 3 | 4 | 5 | 6 | 7 | a great deal of expertise |
|--------------|---|---|---|---|---|---|---|---------------------------|

9) What is your gender? Male \_\_\_\_\_ Female \_\_\_\_\_

## Section 2

Please think back to your most memorable car-buying situation (the one you can recall in the most detail).

1) Please take the next **five (5) minutes** to describe in as much detail as you can remember the situation or series of events that made you decide that you needed a new car. Focus on what happened in your life that made you think about getting a car (do **not** focus on anything to do with searching for or buying the car itself). Visualize yourself back in that time and place. Describe the **situation or events** that led up to the decision to buy a car in as much detail as you can remember

for example, did your car break down *yet again*, were you in an accident, did you move, get a new job or finally save enough money?

What were your **thoughts and feelings** as the situation you described above unfolded? What were your immediate reactions?

for example, were you happy or excited about what was happening, were you angry or upset at the situation, were you in a hurry?

Try to describe all of these types of things as you **tell your story**.

(space provided.)

## Section 3

For each item, please click on the number that best describes how you felt in the situation you just described.

|                       | not at all |   |   |   | extremely |   |   |  |
|-----------------------|------------|---|---|---|-----------|---|---|--|
|                       | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| proud                 | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| pleased with yourself | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| appreciative          | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| grateful              | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| pleasantly surprised  | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| delighted             | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| ashamed               | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| guilty                | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| regretful             | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| annoyed               | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| angry                 | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| disappointed          | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| frustrated            | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| sad                   | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| miserable             | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| anxious               | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |
| hopeful               | 1          | 2 | 3 | 4 | 5         | 6 | 7 |  |

## Section 4

For each item, please click on the number that best describes how you evaluated the situation you just described.

- 1) How important was this situation to you?  

|                             |          |          |          |          |          |          |          |                            |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|
| <b>not at all important</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely important</b> |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|
- 2) How pleasant was this situation?  

|                            |          |          |          |          |          |          |          |                           |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|---------------------------|
| <b>not at all pleasant</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely pleasant</b> |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|---------------------------|
- 3) How good was this situation?  

|                        |          |          |          |          |          |          |          |                       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------|
| <b>not at all good</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely good</b> |
|------------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------|
- 4) Do you believe that this situation was helping you achieve something?  

|                              |          |          |          |          |          |          |          |                                |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|--------------------------------|
| <b>not at all helping me</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>helping me a great deal</b> |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|--------------------------------|
- 5) To what extent do you feel like this situation helped you gain something?  

|                |          |          |          |          |          |          |          |                             |
|----------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------|
| <b>no gain</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>a great deal of gain</b> |
|----------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------|
- 6) How favourable was this situation to you?  

|                              |          |          |          |          |          |          |          |                             |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------|
| <b>not at all favourable</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely favourable</b> |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------|
- 7) To what extent did you think this situation had a desirable outcome?  

|                             |          |          |          |          |          |          |          |                            |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|
| <b>not at all desirable</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely desirable</b> |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|
- 8) To what extent do you feel that you were responsible for causing the situation?  

|                               |          |          |          |          |          |          |          |                              |
|-------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------------|
| <b>not at all responsible</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely responsible</b> |
|-------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------------|
- 9) To what extent do you feel that someone else was responsible for causing the situation?  

|                               |          |          |          |          |          |          |          |                              |
|-------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------------|
| <b>not at all responsible</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely responsible</b> |
|-------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------------|
- 10) To what extent do you feel that nobody (chance/circumstance) was responsible for causing the situation?  

|                               |          |          |          |          |          |          |          |                              |
|-------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------------|
| <b>not at all responsible</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely responsible</b> |
|-------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------------|
- 11) To what extent did you feel harmed by this situation?  

|                          |          |          |          |          |          |          |          |                         |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|-------------------------|
| <b>not at all harmed</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely harmed</b> |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|-------------------------|
- 12) How fair was what was happening to you in this situation?  

|                        |          |          |          |          |          |          |          |                       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------|
| <b>not at all fair</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely fair</b> |
|------------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------|
- 13) How certain were you about what was occurring in this situation?  

|                           |          |          |          |          |          |          |          |                          |
|---------------------------|----------|----------|----------|----------|----------|----------|----------|--------------------------|
| <b>not at all certain</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely certain</b> |
|---------------------------|----------|----------|----------|----------|----------|----------|----------|--------------------------|
- 14) To what extent did you feel like what was happening in this situation was clear?  

|                         |          |          |          |          |          |          |          |                        |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------|
| <b>not at all clear</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>extremely clear</b> |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------|

## Section 5

Now think back to actually choosing the car and the selection process itself..

1) Please take approximately the next **five (5) minutes** to discuss as much as you can remember about your purchase process for buying the car *in as much detail as you can*. Visualize yourself back in that time and place. Try to remember things like:

- *How* you collected information
- Information *sources* you consulted
- *Thought and feelings* you had while making your decision
- Any *decision criteria* and/or *selection methods* you may have used during your decision-making process

Try to describe all of these things as you **tell your story**.

(space provided)

2) What car did you buy?

Make/Brand: \_\_\_\_\_

Model: \_\_\_\_\_

## Section 6

The following questions will ask you to provide information about how you made your decision.

1) How would you rate the amount of time you spent making you car-buying decision, relative to the average person?

**The least amount of time**    1    2    3    4    5    6    7    **The most amount of time**

2) If possible, please try to estimate how long you took to make you purchase decision from the time you started collecting information about cars until the time you decided exactly what car you were going to buy. Consider only the time that you devoted to making the decision (do not include time spent on other activities).

Estimated time to make the decision:

Months: \_\_\_\_\_ Days: \_\_\_\_\_ Hours: \_\_\_\_\_ Minutes: \_\_\_\_\_

3) How would you rate the amount of information you considered (i.e. number of cars and product features) when making you car-buying decision, relative to the average person?

**The least information**    1    2    3    4    5    6    7    **The most information**

4) How would you rate how thorough you were when making you car-buying decision, relative to the average person?

**The least thorough**    1    2    3    4    5    6    7    **The most thorough**

5) How would you rate the amount of effort you put into making you car-buying decision, relative to the average person?

**The least effort**    1    2    3    4    5    6    7    **The most effort**

6) How many makes of cars (for example, Ford, BMW, etc.) can you remember looking at?

1    2    3    4    5    6    7    8    9    10+    **I have no idea**

7) How many product features (for example, fuel efficiency, size, price, transmission type, etc.) were really important to you when selecting a car?

1      2      3      4      5      6      7      8      9      10+      I have no idea

8) Did you feel any time pressure when making your decision?

no pressure      1      2      3      4      5      6      7      a great deal of pressure

9) To what extent did you feel like you had enough time in which to make your decision?

no time      1      2      3      4      5      6      7      a great deal of time

10) Please circle the number that you believe relates to you the most closely.

|   | completely disagree |   |   |   | completely agree |   |   |  |
|---|---------------------|---|---|---|------------------|---|---|--|
|   | 1                   | 2 | 3 | 4 | 5                | 6 | 7 |  |
| Whenever I am faced with a choice, I try to imagine what all of the possibilities are, even ones that aren't present at the moment. |                     |   |   |   |                  |   |   |  |
| I never settle for second best.   |                     |   |   |   |                  |   |   |  |

## Section 7

1) How important was it to you that you make a good decision?

not at all important      1      2      3      4      5      6      7      extremely important

2) How confident are you that you made a good decision?

not at all confident      1      2      3      4      5      6      7      extremely confident

3) How satisfied are you with the decision that you made?

not at all satisfied      1      2      3      4      5      6      7      extremely satisfied

4) To what extent do you believe your decision was a wise one?

not at all wise      1      2      3      4      5      6      7      extremely wise

5) Do you think that your purchase decision:

- ☐ Left you better off than you were originally?
- ☐ Made you worse off than you were originally?
- ☐ Left you neither better nor worse off than you were originally?

***Thank you very much for taking the time to complete this questionnaire!***  
***Lisa Watson will put \$2 towards a donation to the Brisbane Ultimate disc Association (BUDA) on your behalf for your effort!***

## **Appendix 5: Study 3 Scenarios**

### **Scenario 1**

You have recently started a new job. You really enjoy it and have been working really hard to be successful at it. You've only been with the company for a short time when you earn the employee of the month award for top performance. This month the award is accompanied by a \$500 gift certificate for a new mobile telephone!

### **Scenario 2**

You really need a new mobile telephone, but haven't taken the time to look for one yet. One Sunday evening, one of your parents presents you with an envelope. You open it and inside is a note that reads "thought you could use a new one – go shopping and call me later" along with a \$500 gift certificate for a new mobile telephone!

### **Scenario 3**

One day at the shopping centre you are automatically entered into a free draw for a chance to win a variety of prizes from the various stores in the centre, which you promptly forget about. Later that week your mobile phone stops working and you really need a new one. Then the very next day, out of the blue, you get a call saying that you've won a \$500 gift certificate for a new mobile telephone!

### **Scenario 4**

Your parents have just given you a new limited release mobile phone for your birthday and you absolutely *love* it. They were obviously very proud of having picked out such a great gift. Then, one day after class you reach into your bag to pull out your phone and realize you've misplaced it. You search everywhere you can possibly think of with no luck. You've lost your new mobile phone and now you're going to have to replace it. It's time to dip into your emergency funds!



**Scenario 5**

You are walking through a shopping mall when some guy runs into you and disappears around a corner without even a backwards glance. It's almost as if he ran into you on purpose. A few minutes later you reach into your pocket to get your mobile phone to call a friend. It is a limited release model and you absolutely *love* it. But wait, something's wrong. It's missing. It immediately hits you - that guy who ran into you stole your phone. Now you're going to have to replace it. It's time to dip into your emergency funds!

**Scenario 6**

Your mobile phone is a limited release model and you have always absolutely *loved* it. However, out of the blue, it has just stopped working. Because it was a limited release and is now technologically out of date it can't be fixed. You have no choice. You're going to have to replace it. It's time to dip into your emergency funds!

## Appendix 6: Study 3 Questionnaire

### Section 1

Please answer the following questions in the spaces provided.

1) Do you currently own a mobile phone? Yes \_\_\_\_ No \_\_\_\_

If yes, what brand of phone do you have? Brand: \_\_\_\_\_

2) Do you have a preferred mobile phone brand? Yes \_\_\_\_ No \_\_\_\_

If yes, please name the brand. Brand: \_\_\_\_\_

3) Please click on the numbers that best correspond to your feelings about mobile phones. Do not ponder over individual items. It is your first impressions, the immediate feelings about the items, which matter.

#### Mobile Phones:

|                    |   |   |   |   |   |   |   |              |
|--------------------|---|---|---|---|---|---|---|--------------|
| don't matter to me | 1 | 2 | 3 | 4 | 5 | 6 | 7 | matter to me |
| undesirable        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | desirable    |
| useless            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | useful       |
| unwanted           | 1 | 2 | 3 | 4 | 5 | 6 | 7 | wanted       |
| not needed         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | needed       |

4) How familiar are you with the mobile phone market?  
not at all familiar
1
2
3
4
5
6
7
extremely familiar

5) How would you rate your mobile phone knowledge, as compared to the average person?  
one of the least knowledgeable
1
2
3
4
5
6
7
one of the most knowledgeable

6) Do you consider yourself to be an expert on mobile phones?  
no expertise
1
2
3
4
5
6
7
a great deal of expertise

### Section 2

Please read the following scenario *more than once* and *immerse* yourself in it. *Picture* yourself in the following situation. Try to imagine *as vividly as you can* what it would be like to be in this situation. Visualize it as if it is *actually* happening. Focus on your thoughts and feelings as the situation unfolds. Think about how you would *actually* respond.

(See Appendix 5 for the six possible product loss scenarios. Only one of those scenarios appears to the respondent. The entire scenario appears in bold typeface.)

### Section 3

For each item, please click on the number that best describes how you would feel in the situation described above.

|                       | did not<br>feel this<br>particular<br>emotion |   |   | felt this<br>emotion<br>to some<br>extent |   | felt this<br>emotion<br>very<br>strongly |   |
|-----------------------|---|---|---|---|---|--|---|
| proud                 | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| pleased with yourself | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| appreciative          | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| grateful              | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| pleasantly surprised  | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| delighted             | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| excited               | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| ashamed               | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| guilty                | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| angry                 | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| annoyed               | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| disappointed          | 1   | 2 | 3 | 4   | 5 | 6  | 7 |
| sad                   | 1   | 2 | 3 | 4   | 5 | 6  | 7 |

### Section 4

For each item, please click on the number that best describes how you would evaluate the situation described above.

1) How favourable was this situation to you?

not at all favourable    1    2    3    4    5    6    7    extremely favourable

2) To what extent did you consider the outcome of this situation desirable?

not at all desirable    1    2    3    4    5    6    7    extremely desirable

3) To what extent did you feel like you caused the outcome of this situation?

I was not at all responsible    1    2    3    4    5    6    7    I was entirely responsible

4) To what extent did you feel like someone else caused the outcome of this situation?

someone else was not at all responsible    1    2    3    4    5    6    7    someone else was entirely responsible

5) To what extent did you feel like nobody (chance/circumstance) caused the outcome of this situation?

not at all due to chance/circumstance    1    2    3    4    5    6    7    entirely due to chance/circumstance

(continue)

- 6) How pleasant was this situation?  
**not at all pleasant**    1    2    3    4    5    6    7    **extremely pleasant**
- 7) How good was this situation?  
**not at all good**    1    2    3    4    5    6    7    **extremely good**
- 8) Do you believe that this situation was helping you to achieve something?  
**did not help me achieve something at all**    1    2    3    4    5    6    7    **very much helped me achieve something**
- 9) To what extent did this situation help you to meet a goal?  
**did not help me to meet a goal at all**    1    2    3    4    5    6    7    **very much helped me to meet a goal**
- 10) To what extent did you deserved the outcome of this situation?  
**did not deserve it at all**    1    2    3    4    5    6    7    **entirely deserved it**
- 11) How fair was what happened to you in this situation?  
**not at all fair**    1    2    3    4    5    6    7    **extremely fair**
- 12) How certain were you about what was occurring in this situation?  
**not at all certain**    1    2    3    4    5    6    7    **extremely certain**
- 13) To what extent did you feel like you understood what was happening in this situation?  
**no understanding**    1    2    3    4    5    6    7    **a great deal of understanding**

(continue)

## Section 5

1) It is now time to replace your mobile phone. Please choose from the mobile phone models shown on the next page using the information provided.

Once again, imagine how you would feel in this situation. You have \$500 to put towards the purchase. However, you may spend more or less should you choose. If you choose to spend more, you will have to put in the extra money for it. If you choose to spend less, you will have the money that is left over to spend on something else.

To conduct your search:

To view a piece of information click on the square you wish to view. You may take as long as you like and view as many pieces of information as you like. There is no right or wrong answer. We just want your honest opinions.

When you have made your decision, click on the “finished” button. You will then be prompted to indicate which mobile phone you chose. Follow the prompts to enter your choice and return to the questionnaire.

To begin selecting a new phone, click the “begin” button.

## Section 5

To conduct your search:

- To view a piece of information click on the square you wish to view.
- You may take as long as you like and view as many pieces of information as you like. There is no right or wrong answer. We just want your honest opinions.

When you have made your decision, click on the “finished” button. You will then be prompted to indicate which mobile phone you chose. Follow the prompts to enter your choice and return to the questionnaire.

[illegible]

## Section 5

To conduct your search:

- To view a piece of information click on the square you wish to view.
- You may take as long as you like and view as many pieces of information as you like. There is no right or wrong answer. We just want your honest opinions.

When you have made your decision, click on the “finished” button. You will then be prompted to indicate which mobile phone you chose. Follow the prompts to enter your choice and return to the questionnaire.

**Click  
on the  
phone  
you  
would  
like to  
select  
Brand**



**Sony-Ericsson**



**Samsung**



**Nokia**



**Samsung**



**Nokia**



**Sony-Ericsson**



**Nokia**



**Samsung**



**Sony-Ericsson**

## Section 6

The following questions will ask you to provide information about how you made your decision.

1) How would you rate the amount of time you spent making your decision, relative to the average person?

**The least amount of time**    1    2    3    4    5    6    7    **The most amount of time**

2) How would you rate the amount of information you considered (i.e. number of phones and product features) when making your decision, relative to the average person?

**The least information**    1    2    3    4    5    6    7    **The most information**

3) How would you rate how thorough you were when making your decision, relative to the average person?

**The least thorough**    1    2    3    4    5    6    7    **The most thorough**

4) How would you rate the amount of effort you put into making your decision, relative to the average person?

**The least effort**    1    2    3    4    5    6    7    **The most effort**

5) How important was it to you that you make a good decision?

**not at all important**    1    2    3    4    5    6    7    **extremely important**

6) How confident are you that you made a good decision?

**not at all confident**    1    2    3    4    5    6    7    **extremely confident**

7) How satisfied are you with the decision that you made?

**not at all satisfied**    1    2    3    4    5    6    7    **extremely satisfied**

8) To what extent do you believe your decision was a wise one?

**not at all wise**    1    2    3    4    5    6    7    **extremely wise**

9) Please circle the number that you believe relates to you the most closely.

|   | <b>completely disagree</b> |   |   |   | <b>completely agree</b> |   |   |  |
|---|----------------------------|---|---|---|-------------------------|---|---|--|
|   | 1                          | 2 | 3 | 4 | 5                       | 6 | 7 |  |
| Whenever I am faced with a choice, I try to imagine what all of the possibilities are, even ones that aren't present at the moment. |                            |   |   |   |                         |   |   |  |
| I never settle for second best.   |                            |   |   |   |                         |   |   |  |

10) Do you think that your purchase decision:

- ☐ Left you better off than you were originally?
- ☐ Made you worse off than you were originally?
- ☐ Left you neither better nor worse off than you were originally?

## Section 8

Thank you very much for taking the time to complete this questionnaire! Please indicate your preferred choice of compensation for your time and effort by choosing one of the options below.

If you are completing this questionnaire for course credit a ***unique response code*** will appear on the next screen when you hit the continue button. ***Write down that code.*** This is important! Without that code I can not guarantee that you will receive compensation.

Email the code to Lisa Watson along with

- Your name and
- The name of your relevant course

at [lwatson.ca@gmail.com](mailto:lwatson.ca@gmail.com).

Once your participation code has been verified, your grade will be assigned. The purpose of the code is to ensure that your responses remain confidential. Your identity will not be linked to your responses in any data files.

- ☐ If you have completed this questionnaire for course credit in MKTG11-100 please check this box and you will be given a unique code to present to your instructor for verification. *Note: the code is in no way traceable to the responses you have provided.*
- ☐ If you have completed this questionnaire for course credit in MKTG13-303 please check this box and you will be given a unique code to present to your instructor for verification. *Note: the code is in no way traceable to the responses you have provided.*
- ☐ If you are not in one of the two courses listed above and have completed this questionnaire out of the goodness of your heart please check this box. *Note: you will not receive a response code on the next page and your response will remain entirely anonymous.*

(continue to next page)

## Code:

***Write down this code.*** This is important! Without that code I can not guarantee that you will receive compensation.

To receive your compensation email the code to Lisa Watson along with

- Your name and
- The name of your relevant course

at [lwatson.ca@gmail.com](mailto:lwatson.ca@gmail.com).

Once your participation code has been verified, your grade will be assigned. The purpose of the code is to ensure that your responses remain confidential. Your identity will not be linked to your responses in any data files.

***Thank you very much for taking the time to complete this questionnaire!***